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The Transport (Amendment) Bill

TOO much importance must not be attached to the recent Government defeat in both Houses of Parliament on the Transport (Amendment) Bill. This is a private member's Bill which seeks to extend the radius of operations of "A" and "B" licence holders operating without permits from 25 to 60 miles, to transfer from the British Transport Commission to licensing authorities the power of granting, modifying, or revoking, road haulage permits, and to require the B.T.C. to apply to the licensing authorities for licences for its road haulage vehicles. As might be expected, it was passed by the Lords, and the debates there on the Bill have been noted in this and in previous issues of this journal. Whether it is more than an attempt to harry the Government is problematical. Opposition speakers, disclaiming any attempt to nullify the Transport Act, 1947, described it simply as an attempt to alleviate the lot of short-distance hauliers (partly by protecting them from a B.T.C. road-haulage monopoly) and to provide the public with road transport facilities superior to those provided by the Road Haulage Executive. For the Government, emphasis was laid on the very small threat to private hauliers so far represented by nationalised road transport, and the freedom with which the B.T.C. has issued licences since nationalisation. The Bill was not unnaturally considered as entirely contrary to the principles of the Transport Act. Its effects on the railways (assuming the extremely unlikely event of its becoming law) would in any case be small, and confined to parcels and certain merchandise traffic—bearing in mind the exten-

sion of the road haulage radius to only 60 miles. On the other hand, assuming a change of Government, it might in some way prove to be a thin end of a wedge in re-establishing private ownership in transport, though a new Government could hardly fail to support the railway system it inherited. The Bill is more likely to be only a political manoeuvre, and even its supporters may secretly agree with the Minister of Transport that if they wanted to amend the Transport Act, this is not the method.

The Indian Railway Budget

THE railway budget for 1951-52 which Shri Gopalaswami Ayyangar, the Indian Railway Minister, presented to the Indian Parliament, expects a surplus of Rs.21.85 crores (Rs.1 crore equals approximately £750,000) of which Rs.10 crores will be placed to the development fund and Rs.11.81 crores to the revenue railway fund. He announced that passenger fares would be increased by from 25 per cent, third class to 12.5 per cent, first class; this was expected to yield Rs.19 crores annually. Gross traffic receipts were put at Rs.279.50 crores, against working expenditure, including depreciation appropriation, of Rs.216.97 crores. The Minister said that Chittaranjan works should turn out 36 locomotives in the current year. It was proposed soon to establish a coach-building unit in India, but this year purchases of rolling stock totalling Rs.24 crores would be placed, including orders placed abroad. The re-grouping of the Indian railways was also referred to, and elsewhere in this issue we report that proposals for a Southern group have been accepted. For the 1951-52 programme, Rs.66.5 crores had been allocated.

British Standards Institution

THE origin of the British Standards Institution was in 1901, when the Institution of Civil Engineers appointed a committee for the standardisation of steel sections; it was estimated that their success in this reduced costs by 5s. a ton, and saved industry £1,000,000 a year. From this developed the B.S.I. of today, with 2,000 technical committees, and 1,500 general and 200 special standards. Current annual expenditure is less than one-quarter of the saving from the work of the original committee, but as expenditure may double in a few years, a committee was appointed by the Board of Trade in 1949 to consider the B.S.I. organisation and constitution. Its recent report* refers to modern trends towards standardisation in industry, (which will necessitate expansion of the Institution), and praises the free services to the B.S.I. given by industry and the Government. The latter's contribution, it suggests, should equal the income from industrial subscriptions, partly because the public benefits, as consumers, from B.S.I. activities. The committee finds the constitution and organisation of the Institution well adapted for its future increased duties, and suggests that it remains under the control of its General Council, retaining its present status as a body incorporated by Royal Charter. The B.S.I. has expressed general acceptance of these recommendations.

Packaging for Rail Transport

IN a paper presented during the National Packaging Exhibition held in London recently, Mr. T. E. Jackson, Assistant to Commercial Superintendent (Claims), London Midland Region, said that during 1950 one claim for damage was paid on every 2,000 packages carried by the railways, and of the total packages carried 99.95 per cent. were safely delivered. Due to the very large amount of business done, however, those claims which had to be met proved very costly, and were causing British Railways much concern. Mr. Jackson then outlined the essential precautions to be taken to reduce these claims. Packages must be sufficiently strong to withstand normal treatment during handling and transit; they should be damp proof

* Report of the Committee on the Organisation & Constitution of the British Standards Institution. H.M. Stationery Office Price 1s

and difficult to pilfer, and their destination clearly marked. Regarding progress made in the use of fibreboard containers, the author pointed out that the original idea was that these should be expendable, but the railways were called on to deal with a very large traffic in returned empties, which, incidentally, gave rise to well over 100,000 claims a year, generally because of the unsatisfactory way in which some traders returned their empties. Much time would be saved and considerable annoyance avoided if traders would appreciate the importance of adequate packing apart from the unnecessary expense involved in meeting claims.

Railway Architecture

IN opening the "Architecture of Transport" exhibition at the Royal Institute of British Architects last week, Lord Hurcomb, Chairman of the British Transport Commission, paid a tribute to the merit of the buildings which the railway architects of the last century had left us. This heritage is often overlooked because some of the work has been overlaid with unfortunate accretions by their successors. It is fortunate that they constructed well in those days, for these buildings will remain with us, for good or ill, for many more years, in view of the present economic position which confines to paper a number of large reconstruction schemes like that for Banbury. Nevertheless, if British Railways cannot at present follow such overseas examples as the new Rome Station, they can at least improve what they have. Some excellent new booking halls and refreshment rooms are proof of good intentions. The railway architect's contribution, however, is not restricted to large-scale works. The B.T.C. recognises that special attention must be given to the smaller items, including lineside structures and station accessories, so that the whole field of formal design may be under expert supervision.

Air Passenger Transport

HOW soon air travel within Britain—excluding, that is, those parts to which sea is the only alternative to air travel—will become competitive with the railways for passenger business seems to depend on the solution of the physical and financial difficulties of air terminals in relation to city centres, and of fog. The Chief Executive of British European Airways, Mr. Peter Masefield, in his paper* recently read to the Institute of Transport, expresses his belief that, given peace and a consistent air policy, British civil air transport will make profits, and he shows how, even for the (by airline standards) short London-Paris route, costs per seat-mile have been reduced, shortness being a disadvantage in relation to terminal costs. Most distances between British traffic centres, however, are shorter still. Nor, with nationalised railways in their present financial state, does it seem likely that the Government will go far out of its way to subsidise competitors, though internal airlines on a small scale might form part of an integrated transport system. Mr. Masefield's practice of disclosing facts frankly and promptly is refreshing.

100-Mile Non-Stop Runs in Ireland

A FEW years ago a regular scheduled run in Ireland of over 100 miles from start to stop was unknown; today, although no replenishment of tender water supply from track-troughs is possible, seven such runs are being made daily. The Great Northern Railway (Ireland) was the first to introduce regular 100-mile runs when the "Enterprise" express was introduced in August, 1947, covering the 112.5 miles in each direction between Belfast and Dublin in 135 min., at an average of 50 m.p.h. The later duplication resulted in four of the runs being made daily and two of them now have been taken over by a three-car diesel-electric set. An extension of the morning "Enterprise" service from Belfast to Cork in 1950 over C.I.E.

metals, has produced two more 100-mile runs between Amiens Street, Dublin, and Limerick Junction, 110.6 miles, booked in 135 min. southbound and 127 min. northbound, allowing for the slow running necessary round the curves from Island Bridge Junction to Amiens Street, the C.I.E. locomotive coming north must pass Clondalkin, 102.5 miles from Limerick Junction, in 114 min., or a scheduled average of practically 54 m.p.h. A seventh run is that of the C.I.E. 11.40 a.m. from Cork: booked non-stop over the 106.9 miles from Limerick Junction to Kingsbridge in 130 min.

Relay Interlocking in the Netherlands

THE necessity of making good much wartime damage, amounting at times to complete loss, led Mr. J. H. Verstegen, Signal Engineer, Netherlands Railways, to consider introducing relay interlocking and speed signalling. The situation created by the extension of electrification also influenced this decision. Automatic signalling, using for the most part the ordinary semaphore type signals, had been installed on several sections before the war, involving, of course, no change in the principles of the signal aspects. The almost complete destruction of the signalling at s'Hertogenbosch Station offered an opportunity to make a fundamental change and it was decided to instal the "NX" route relay system, which may be seen at Stratford on the Eastern Region lines. An account of the main features of the s'Hertogenbosch layout appears in this issue. Combined with it are the new 3-speed signalling aspects, in which up to three "searchlight" type signal units can be carried on one post and can show "proceed" at "unrestricted," "medium" or "slow" speed, and if a lower speed must be observed at the next signal in advance, that also is indicated. A single red light indicates "stop" and lunar white lights show the relative position of the "proceed" aspect or aspects and hence the upper limit of speed which is for the time being imposed.

Western Region Gas-Turbine Locomotive Running

THE performance of the gas-turbine-electric locomotive of the Western Region of British Railways has been most encouraging so far. Elsewhere in this issue is an article describing runs with No. 18000 that show a haulage capacity equal to that of a "Castle" class 4-6-0 and probably to that of a "King" also. In starting from rest or in climbing exceptionally steep gradients No. 18000 has put up performances which appear to have established new records. Among these there is an acceleration to 60 m.p.h. up 1 in 90 and the completion of the climb from the east to Dainton Summit, at one point as steep as 1 in 36, at 41 m.p.h.; and in the opposite direction a time of 3 min. 28½ sec. for the 2.7 miles from Plympton to Hemerdon, which includes 2¼ miles at 1 in 41.42; even with loads of 215 and 210 tons these are unprecedented achievements. On several runs speeds from 80 to 90 m.p.h. were attained, and journeys at over 60 m.p.h. from start to stop were made with loads up to 470 tons. Frequently, the locomotive had to be eased to avoid running ahead of time and as yet there does not appear to have been any test of its maximum capabilities continuously over a long stretch.

Three-Cylinder Locomotives for the Argentine

ELSEWHERE in this issue are described and illustrated the three-cylinder "PS11" class locomotives recently completed by the Vulcan Foundry Limited. The locomotives, which will operate on the General Mitre Railway, Argentine, are a modernised version of those of the same class, details of which were contained in the January, 1931, issue of *The Railway Engineer*. Resulting from the nationalisation of the Argentine Railways in February, 1947, to which reference was made in our March 14, 1947, issue, modifications in design were carried out to enable the locomotives to operate over other sections of the system. These modifications included a decrease in the proportion of reciprocating weight to be balanced in the coupled wheels from 50 to 33 per cent. Fuel-tank capacity was increased from 8 tons to 11.6 tons and the water-tank capacity

* "Some Economic Factors in Air Transport Operation." Brancker Memorial Lecture to the Institute of Transport, February 12, 1951

decreased in proportion from 10,000 gals. to 9,000 gals. so as not to increase the tender weight in working order. An independent steam brake is also provided and the Ajax system of grease lubrication is arranged for the connecting and coupling rods. The modifications in design were carried out by Robert Stephenson & Hawthorns, Darlington, associates of the Vulcan Foundry Limited.

The Railway Wages Settlement

A FEATURE of the agreement concluded last week between the Railway Executive and the three railway trades unions, and of the negotiations which preceded it, which makes it probably unique in the history of industrial negotiations, is the extent to which the hands of the Executive were tied. On the Executive fell the responsibility for making a decision affecting a vast sum of public money, in the granting of increases to the men amounting to £12 million annually. This in itself was about halfway between the unions' full claims and the Executive's first offer. It is clear from study of the negotiations (details of which are given elsewhere in this issue) that the Executive was subjected to pressure from the Government—some of the daily press did not hesitate to state that the Executive had to bow to a Cabinet decision.

It is abundantly evident that the agreement eventually concluded was not based on the economic position of the industry, or its ability, even in prospect, to bear the additional burden imposed. Indeed, the timetable of the comings and goings on Thursday of last week, with the various meetings with Ministers, seems to show that a decision on political grounds to accord the 7½ per cent. increase had already been made at least by that afternoon; this is borne out by the answer (recorded on another page of this issue) made that day in the House of Commons by the Minister of Labour (in a reply to a question by a Labour member) suggesting openly, and in our view most improperly at such a juncture, that the Government had intervened directly in the dispute.

As the Government had already made up its mind, the position of the Railway Executive was more difficult, with greater restrictions on liberty of judgment, than in any previous railway wage crisis. In the circumstances, the Executive has made the best of a very difficult situation; and although the final decision, and indeed all steps in the negotiations, doubtless had the backing of the Executive as a body, credit is due to its Chairman, Mr. John Elliot, and to the Member for Labour Matters, Mr. W. P. Allen, on whom fell the brunt of the task, for the skill and pertinacity with which they pressed their case for some counterbalancing agreement which would enable manpower economies to be made. The measure of their success is in the statement signed by both parties, which not only secures (by implication) the desired abandonment of wasteful and restrictive practices, but provides for the future co-operation of the unions in ensuring this and in sympathetic examination of future proposed economies. Much depends on the constructive use of this manifesto, but it gives the new Chairman of the Executive an opportunity to use the skill he has already displayed in another sphere of cultivating good relations with all sections of the railway staff. There is undoubtedly a need at the present time to overcome any feeling among the great body of the railwaymen that the Executive is an impersonal and bureaucratic body. A closer approach to, and liaison with, the rank and file by the management, such as was a feature of the pre-nationalised railways, is required. If that can be achieved, much will have been done to secure more efficient working.

Another difficulty with which the railways were faced was the fact that public opinion (which is not well informed on complex subjects such as lodging turns) was in sympathy with the railwaymen's claims for higher pay, because of a widespread realisation that in comparison with those in many other industries—notably coal-mining—railway wages have not shown so large an increase over pre-war levels. Railway wages, which were low in 1938, had since then (until, that is, last week's increase) risen by an average of only 70 per cent., against the miners' 194 per cent., and

an advance of 87 per cent. in the cost of living. Had any action of the Executive resulted in an official strike—disastrous in the prevailing circumstances of this country—the Executive would have incurred much odium.

As to the financial consequences to the railways, the £12 million payable in increased wages to members of the three railway unions is not the only additional annual charge incurred; some £25 million will have to be found this year to cover other increased outgoings for coal and other commodities and other wage increases for railway shopmen. The Railway Executive has made it clear to the Government that it cannot raise the money by economies or increased efficiency. The only solution (pending integration in the form of charges schemes, which is a long-term measure) is to raise rates and fares. This can be done as an interim measure with some expedition by the Minister of Transport availing himself of the procedure laid down in the Transport Act, 1947, that is, by regulation after consultation with members of the Transport Tribunal. This machinery, however, must be set in motion by the British Transport Commission, and in the meantime there are bound to be protests from trade and industry and much loss of traffic. It is significant, and a reflection on the present structure of nationalised transport, that the Commission, which is responsible for the finances of nationalised transport, has played so small a part in the wages dispute affecting one of its Executives, with so great a financial sum at stake.

G.N.R.(I.) Acquisition Offer Rejected

THE results of the census of the views of G.N.R.(I.) debenture holders and stockholders on the valuations adopted by the governments of Northern Ireland and the Republic of Ireland for their offer of acquisition of the railway were disclosed by Lord Glenavy at the annual meeting of the Great Northern Railway Company (Ireland) on February 24. Lord Glenavy, whose speech is reported elsewhere in this issue, said that 72.8 per cent., representing £6,727,705 worth of stock of a total of £9,244,020, had voted for rejection. Two resolutions were passed at the meeting. One rejected the governments' offer of £3,900,000 and demanded that, if the governments claimed that they had a case for paying less than the break-up value of £10,876,492 agreed by government nominees, the matter should go to arbitration. The other resolution authorised and requested the directors to press the application for the discontinuance of services in Northern Ireland. It will be recalled that the offer by the governments came after the directors had been instructed at an extraordinary meeting on December 8 to take proceedings in conformity with the law for discontinuing services north of the Border. No legal procedure exists for such an Act in the Republic of Ireland.

As Lord Glenavy replied to a suggestion that they should seek statutory powers for abandonment, it is inconceivable that a system like the G.N.R.(I.) should reach such a stage. The governments have given assurances that the company's liabilities incurred in maintaining existing services will be met out of public funds, but when and to what extent they will meet them remains undecided. Without this guarantee the company rightly feels that it cannot take the risk in ordering new material required.

The Stockholders' Protection Association of the G.N.R.(I.), which has been waging a ceaseless fight for just terms, took further prompt action on the day after the meeting. Its Chairman sent a letter to all members of the Dublin and Belfast Parliaments urging them to use their influence to avert "an end to this company's century of distinguished public service so discreditable to Ireland as would result from imposing on the stockholders any such terms as those on which the offer is based." Though the stockholders' action in rejecting the acquisition terms is understandable and indeed was fully expected, the alternative to acceptance is by no means clear. In the interests of equity it may be hoped that the governments may decide to allow the valuation for acquisition of the G.N.R.(I.) to be the subject of independent arbitration.

"The Iowa Pool"

DR. JULIUS GRODINSKY, Associate Professor of Finance, Wharton School, University of Pennsylvania, has made a thorough study of railway competition in the Missouri-Mississippi Valley during 1870-1884. In those years there was little Government regulation of transport and the object of his study was to reach a proper understanding of the part played by the railways in the economic and social growth of the Middle West States of the U.S.A. The result of the enquiries by Professor Grodinsky has now been published in a small volume.*

In 1870, three railways served the territory between Chicago and Council Bluffs, on the Missouri opposite Omaha. These were the Chicago & North Western; Chicago, Rock Island & Pacific; and Chicago, Burlington & Quincy. In the previous year, the Union Pacific had completed its line to Omaha, and, to avoid a rate war over the traffic passing from west of the river to the Eastern States, the three Chicago companies agreed to share the business and so stabilise rates. The arrangement was known as "The Iowa Pool," and held firm until 1884.

The author explains, with meticulous care, how the existence of the pool was threatened frequently by new competitors. The gross amount for division among the member companies, about \$3,000,000 a year, seems insignificant nowadays, but the principle at stake was important, and the pool was kept in being until Jay Gould secured control of a number of railways in the Missouri Valley and was able to divert Union Pacific traffic from the pool lines to other routes.

The Wabash, which carried much of the diverted traffic, was admitted to the pool in 1881 as a fourth member, and about a year later the Chicago, Milwaukee & St. Paul, as well as the Missouri Pacific, also joined, making six member companies in all. The pool then took the name of "Iowa Trunk Line Association" and employed a commissioner to manage its affairs. He was not in office for long. In December, 1883, a tripartite contract was made between the Union Pacific, the Rock Island, and the St. Paul to organise a "Western Trunk Line Association." The Northwestern and the Wabash threw in their lot with the Western Association and the Burlington was left to fight on its own.

Such was the end of "The Iowa Pool." Competition proved too strong for it, but for some 13 or 14 years it benefited its members without injuring the public or stopping railway expansion. We admire the industry Dr. Grodinsky has shown, in trying to draw a picture in detail of the railway world as it existed before Congress prohibited pooling in 1887, but cannot help feeling that his time and labour might have been spent to better purpose in examining one of the live problems which confront railways and regulatory bodies today.

Gold Coast Railway

THE report of the Gold Coast Railway & Takoradi Harbour for the year ended March 31, 1950, which has been sent us by the General Manager, Mr. W. H. Salkield, states that during the year under review there were three stoppages of work, including a most serious hold-up in January, 1950. Although it was possible to work a skeleton service of goods trains during the long stoppage, there in effect was the loss of one whole month's work. These strikes reflected most unfortunately on passenger journeys and tonnage conveyed, and there is no doubt that the railway administration would otherwise have broken all records for both tonnage conveyed and revenue collected.

Goods tonnage conveyed showed an increase over the preceding year, but Mr. Salkield estimates that but for the work stoppages, traffic would have exceeded 1,800,000 tons; the main increases were in timber traffic and cocoa.

The fall in passenger traffic is ascribed partly to the strikes and partly to the preference given to goods traffic (of which latter mention was made in the previous year's report summarised in our November 3, 10 & 17, 1950, issue); contributory factors were road competition, intensified by the abolition of petrol rationing.

The following are some of the principal results:—

	1948-49	1949-50
	Thousands	
Railway:		
Goods tonnage conveyed	1,675	1,699
Passenger journeys	5,236	4,678
	£ thousands	
Goods receipts	1,668	1,832
Passenger receipts	472	409
Gross receipts	2,250	2,347
Operating expenditure	1,714	1,933
Takoradi Harbour:		
Revenue	402	461
Expenditure	161	192

The supply position from the United Kingdom showed considerable improvement; deliveries included: 15 new locomotives of the "125" class, 127 low-sided wooden wagons, and 26 passenger vehicles. The receipt and assembly of this new rolling stock placed a heavy strain on the normal administration of the locomotive and carriage & wagon workshops, but all the vehicles were placed in traffic before the end of the year, and were a very welcome addition to the stock required for the increased tonnages to be handled. Outstanding orders, states the report, were far from completion at the end of the year under review and it was necessary to keep in service a large number of locomotives which would normally have been scrapped.

Although progress was made with development schemes, there were many difficulties with regard to slow delivery of necessary steelwork and shortage of experienced engineering staff. Before the close of the year all the necessary steelwork for the extension to the locomotive shops was received, but could not be erected; most of the foundations and groundwork were completed. The principal part of the survey work for the doubling of the line between Takoradi Junction and Tarkwa was completed and the contract placed for the preparation of earth-works for the first 3½ miles was well in hand before the close of the year. Steelwork for the re-building of Tarkwa and other stations was pre-fabricated in Britain and began to arrive towards the end of the year.

Railway Towns

THOSE who consider the planned and self-contained new industrial town as a modern feature, closely associated with the economy of the Welfare State, will be apt to receive a shock if they read Dr. Chaloner's fascinating social and economic study of the development of Crewe.* Pre-eminently, Crewe was a railway town from the beginning, and, although it was matched to a great extent by the New Swindon of the G.W.R. and Wolverton of the London & Birmingham Railway, and (to a smaller degree) by Ashford of the South Eastern Railway, none of these was quite such a striking example of industrialism under private enterprise working out its own salvation without State assistance or intervention. During the railway construction stage, railway companies were notoriously unmindful of the conduct and welfare of the temporary labourers engaged on the work (probably because they were seldom in direct railway employment), and often the navvies descended like a blight on a rural community. The railways took a different attitude, however, towards the highly-paid skilled mechanics and workers in their permanent establishments, and, when they planted large-scale industrialism in rural areas, they assumed a general responsibility that has been termed, not inaptly, "railway paternalism."

The Grand Junction Railway, with its shops at Edge Hill, Liverpool, appears to have decided as early as 1840

* "The Iowa Pool": A Study in Railroad Competition: 1870-84. By Julius Grodinsky. U.S.A.: The University of Chicago Press. London: Cambridge University Press, 200, Euston Road, N.W.1. 91 in. x 61 in. 184 pp. Price 30s.

* "The Social and Economic Development of Crewe: 1780-1923." By W. H. Chaloner, M.A., Ph.D. Manchester University Press, 8-10, Wright Street, Manchester, 15. 8½ in. x 5½ in. 326 pp. Illustrated. Price 30s.

to transfer them to Crewe, where expansion was easier, for the board then ordered the purchase of a considerable quantity of land "at the junction of Crewe." This junction station had taken its name from a little township which remained outside what became the municipal borough of Crewe until 1936. The land purchased by the railway was in the ancient township of Monks Coppenhall, the boundaries of which constituted "railway Crewe" when it was incorporated in 1877, and remained so until an enlargement of 1892. When a building contract was placed in 1841, it included the works and also about 200 cottages. Problems of sewerage and water supply resulted in an expansion of the railway colony plans, and the Rector of Coppenhall called attention to the inadequacy of existing church accommodation. The railway company thus undertook the task of laying out a town, leaving space for a church and school. Later, the board resolved that it was "the duty of the company to contribute liberally towards the supply of spiritual instruction and education." The shareholders were asked to contribute "on the principles adopted by the London & Birmingham Railway," and part of the Sunday Travelling Fund (accumulated dividends refused by strict Sabbatarian shareholders) was added. The immediate results were the building and endowment of Christ Church, which was consecrated on December 18, 1845, with the patronage vested in four directors, and the establishment of a National School.

"Local government" also came within the purview of the railway authorities, as they assumed a general responsibility for the community they had formed and in early years provided a town hall, public baths (the first were built in 1845), a gas works, and even a scheme for health insurance. This "railway paternalism" degenerated, and, after representative local government had been established, there was a period in which the railway (by this time the L.N.W.R.) endeavoured to exercise a form of political dictatorship as the largest ratepayer and the employer of many voters who could be intimidated through their jobs. Yet even this period, though undemocratic and authoritarian, in accordance with the later-Victorian views of successful commerce, had much of benevolence about it. For example, when Francis William Webb was Mayor of Crewe in the Jubilee Year of 1887, he secured from the L.N.W.R. directors a grant to the Corporation of land for the present Queen's Park together with £10,000 for laying it out.

Dr. Chaloner has included a chapter on "The History of Crewe Railway Works and Engine Sheds." It is as good a summary of the development of the multifarious activities there as we have seen; it does not deal with the Crewe-built engine, which is outside the scope of the present study. On the whole, the industrial history of Crewe Works has been peaceful, but the careful account of labour conditions and the rise of trade unionism constitutes in itself a valuable reference work. All interested in the development of the railway industry will find in Dr. Chaloner's study of Crewe a wealth of little-known information about the activities of a great railway company.

Some Aspects of Transport Policy Today

(By a Correspondent)

UNDER the heading "Some Aspects of Transport Policy Today," the *London & Cambridge Economic Service Bulletin* for November published an article written by Messrs. C. F. Carter, A. R. Prest and A. D. Roy. We turned to it in the hope of finding a critical review of the British Transport Commission's main operations since January, 1948. We were disappointed. The joint authors, after declaring that it is time to assess the Commission's progress, shun any attempt to weigh up developments on the ground that the problem of transport charges must be solved before we know how things are going. The article thus becomes little more than a collection of academic musings, which are not likely to be of practical value at the present juncture.

The first section of the paper restates the well-known facts about the rail-road position. The second and third

sections enumerate various proposals for fixing rail and road rates, either on theoretical or commonsense principles, only to dismiss them as not providing a satisfactory solution of the charges problem.

The fourth section tries to explore the Commission's own ideas about charges and the future shape of the transport system. It touches on the draft outline of the principles to be embodied in a charges scheme for merchandise, published at the end of 1949, but does not comment on points which invite criticism, such as the notion that "exceptional rates" can be brought to an end. The article also quotes the Commission's statement of policy on "Integration of Freight Services by Road and Rail," which indicated that, as a general rule, goods passing in bulk or over long distances should go by rail, leaving road transport to concentrate on short-distance traffic and on feeding the railways. Apart from these official documents, the writers have not discovered any clear indication of the Commission's policy and wisely conclude that any complete view of the transport system as a whole will not be possible until the charges scheme has been formulated.

The article does not end there. Its authors add a fifth section, to give their own suggestions on future policy. In their opinion, the Commission should aim at varying charges in accord with transport costs on different routes. Uniform mileage charges, applicable to all routes, should be discarded and one element in the composition of railway rates should be a fixed charge reflecting the high or low costs of handling traffic on particular routes or at particular stations. The article assumes that the railways would benefit by concentrating on long-distance traffic, without giving any estimate of the volume of traffic coming under that head or considering that the cost of working long hauls would rise if the railways lost most of their short traffic and any large proportion of their medium-distance carryings. Again the writers admit that "some closing down of high-cost routes and high-cost stations" would be involved, but do not give an estimate of the extent of this abandonment.

Passenger fares are treated without regard to their historical background. In its 1949 report the Commission said that passenger fares had already reached levels which tended to discourage traffic. The article would discourage it further by abolishing the difference per mile between single and monthly return tickets. The Commission might then adopt a third class charge of, say, 2s. 6d. per journey plus 1d. per mile, with the object of choking off unprofitable traffic to road. Finally a doubt is expressed "as to whether there is any rhyme or reason about some of the cheap tickets on Wednesday evenings and Saturday afternoons (or the like) which are now offered by the railways. Nor is it obvious why there should be more cheap fares in the summer . . . The first class fare also needs re-examination: it is probably unprofitable and perhaps first class passengers ought to pay more for their privileges."

It is surprising to find these *obiter dicta* in an *Economic Service Bulletin* without any supporting analysis of the available information about passenger travel. The facts about first class bookings, for example, are plain enough. Comparing 1949 and 1948, the number of first class journeys decreased by 7 per cent. and the first class takings by 14 per cent. The 1950 series of *Transport Statistics* shows that the decline goes on. Returns show that in September, journeys were 12 per cent. fewer and takings 15 per cent. less. These downward trends may point to the advisability of withdrawing first class accommodation from many trains, or to the need for reducing the differential between first and third class fares on some routes, but upset the notion that a special imposition on first class travel would increase railway net revenue. On the other hand, there is additional revenue to be earned by judicious experiments with cheap fares and excursion trains. A close watch can be kept on the results, and facilities which do not pay can be withdrawn. Provided that care is taken to see that cheap bookings are not supplanting ordinary fares to a serious extent, passenger travel offers a much wider field than freight traffic for trying new devices. British Railways will do well to cultivate it energetically, but with due discrimination.

LETTERS TO THE EDITOR

(The Editor is not responsible for the opinions of correspondents)

Timetable Complication

February 14

SIR,—On behalf of two American visitors may I use your space to protest at the negligent manner in which the London Midland Region timetable is compiled? These two overseas visitors desired to travel on a morning train from Huddersfield to Euston. After being handed a London Midland Region timetable when they enquired as to the train service at another London Midland Region station, they turned to Table 50, looked under the columns headed "a.m." and chose the 11.22. When they arrived at Huddersfield Station to catch that train, they stood and waited on the platform in vain, for it runs at 11.22 p.m.

Yet there is nothing in the timetable to tell any prospective traveller that the train departs at 11.22 p.m. and not a.m.; the column is headed by the figures "a.m.", with not a mention of "p.m." to be found anywhere at all throughout its entire length. On checking their story, I discovered that other trains are just as misleading. The 12.28 p.m. Huddersfield to Euston is in a column headed "a.m.", the London Midland authorities evidently considering that the day changes to "p.m." when the train is between Manchester, dep. 2.20 (a.m.?) and Macclesfield, dep. 2.42 p.m.—for that is where the "p.m." is inserted.

In other countries it is considered advisable to show p.m. and a.m. times in different thicknesses of print or to use the 24-hr. clock so that mistakes of this nature may be avoided. Surely the L.M. Region could take the trouble to insert the appropriate letters at mid-day and midnight or if this be impracticable, use two different types of print? Otherwise one can only conclude that the London Midland Region cares little whether prospective travellers wait 12 hours on Huddersfield Station or just give up and use other means of transport as in the case of the American visitors.

Yours faithfully,

GARNOCK

Kilconquhar, Fife

Southern Region Pacifics

February 7

SIR,—The contributor of the original article in a modelling journal is biased against these engines, and will not give them a favourable word. I believe that they have many good engineering features which compare favourably with certain other much vaunted designs on other Regions.

In the valve gear there would appear to be serious weakness, but I have not seen criticism of the regulator valve, which, in my view, is the cause of much of the trouble. I am not very familiar with the design of the regulator valve on the Bulleid engines, but believe it is similar to that on the Gresley Pacifics, that is, of the double-beat type with no pilot valve, a type of valve which is noted for its ability to pass a large volume of steam for a small opening of the valve from its seat.

The Gresley engines are prone to slipping at starting. Small wonder when one considers the type and size of valve used, and the same fault is apparent with the Bulleid engines, though, perhaps, to an even greater extent. This slipping is often severe, and revolutions much higher than those achieved when running can be attained suddenly; deceleration, in the final stages of a slip, is also at a high rate.

It may seem therefore that with valve gears not particularly robust, such as the Gresley conjugate gear and the Bulleid chain-driven gear, the sudden stresses imposed by severe slipping at long cut-offs must inflict severe damage. The Gresley gear, for instance, was never intended to be worked at high speed with long cut-offs, nor, I should think, was the Bulleid gear, yet when a violent slip occurs at start-

ing, these undesirable conditions are present in an aggravated form.

The regulator valve in the boiler of a Gresley Pacific is about 8 in. dia., and, as it has two seats, the area open to steam when the valve is lifted $\frac{1}{2}$ in. is something over 6 sq. in. I maintain that it is difficult to regulate such a valve to a fine enough opening for clean starting. This type of valve, therefore, is most unsuitable for a locomotive regulator.

Yours faithfully,

D. H. YARNELL

31, Milton Street, Lincoln

High-Speed Tyre Turning

February 20

SIR,—In your issue of February 16 I notice an editorial note headed as above. From this I learn that one of the railways in U.S.A. has recently installed a new wheel lathe which will give a floor-to-floor time of 40 min. for a pair of wagon or carriage wheels.

I should like to state that a better performance than this was being obtained in this country 20 years ago. In March, 1938, I read a paper (No. 390) to the Institution of Locomotive Engineers. (*Journal* No. 144) and quote the extract from this. "With regard to output, it is possible to complete a pair of tender or bogie wheels in 20 min. floor-to-floor time with one operator: it does not follow, however, that 24 pairs of wheels are turned in an eight-hour day, 12 to 14 is a more usual figure, which includes tool changing, and waiting for crane, etc."

This, it should be noted, is a regular all day output of a pair per 35 to 40 min., and moreover, one of the machines on which I had based my figures was a wheel lathe which I had been responsible for installing in 1931. It is still at work, and has been used for the greater part of its life on day and night shift. I may add that it is of British manufacture.

Yours faithfully,

D. H. KEENE

Derby Railway Engineering Club, Derby

Accidents at Level Crossings

February 19

SIR,—The report (summarised in your December 29, 1950, issue) of the fatal accident at East Shalford level crossing, when the 8.58 a.m. down express Ram-gate to Birkenhead ran down and killed the two occupants of a private car prompts the writer to offer a few thoughts on this type of level crossing, of which there must be hundreds throughout British Railways.

It appears that this accident is a perfect text book example of that bogey of railway operating, the human element. In this case the writer feels that, although in most of British Railways operations the smallest margin possible is left for human or mechanical/electrical errors a large gap existed at the East Shalford crossing.

The weak link seems to be the use of the telephone as the only means of informing the crossing-keeper what trains were about. This, as came out at the inquiry, probably was the cause of the accident, due to confusion of the railway terms "up" and "down."

I realise that to equip all crossings of this nature with proper signalling would be far too expensive. Would it not be reasonably cheap, to enable the nearest signa'box to operate a movable banner in the crossing hut to display alternately notices such as "Danger—Do Not Open Gates" and "All Clear"?

This banner should be operated by a signal lever in the box interlocked with all other levers (affecting railway

traffic over the crossing), with the "All Clear" indication in the "on" position of that lever. A refinement would also be electrical interlocking with the train describing instrument, i.e., until this lever is put back to show the "Danger," etc. banner, the "train on line" will not pass to or from the "box" the other side of the crossing. Further, as suggested in the report, gates which open away from the track are dangerous. It would, therefore, be much better if the two gates were coupled, as in the standard four-gate level crossings.

Yours faithfully,

H. E. NORMAN

4, Silver Street, Dursley

Delayed Goods

February 24

SIR,—Mr. Laundy, in your February 23 issue, is right about the train load; about 125 tons was the average tonnage of goods carried per train in 1938. Of this, 9 or 10 tons was free-hauled, and the average payload therefore about 115 or 116 tons. These figures, however, are not accounted for by the fact of a large number of small consignments, or by their bulk, but by the way the tonnage is manipulated, and by the inadequacy of wagon-capacity, both as to tonnage and as to cubic.

If these millions of small consignments had been concentrated on fewer stations, both at the collection end and the delivery end, average loads of about 9 tons could have been obtained even with the pitifully small wagons used in 1938, and the number of wagons used reduced to about one-third. With larger wagons—20-ton, 30-ton, 40-ton or even 50-ton—and greater cubic capacity per ton deadweight, greater average wagon-loads could be obtained, and the relationship between gross weight and payload be improved substantially.

The operating method required to attain these absolutely essential improvements is the use of the road vehicle, horse and motor, for concentration of traffic instead of multitudinous slow-moving, poorly-loaded feeder trains, which in turn involve either transhipment or shunting and marshalling. The equipment required is the larger wagons so long advocated by Mr. E. R. B. Roberts and vastly improved handling facilities at the fewer stations which concentration would need.

In referring to wagon load, may I once again emphasise that the railway statistics of average wagon load refer to loaded wagons only?

Yours faithfully,

FREDERICK SMITH

65, Hallowell Road, Northwood

An Electrification Policy

February 6

SIR,—The long-heralded standard Pacific locomotive would appear to be a yardstick by which the Railway Executive may be fairly measured. In other words it is an undistinguished collection of features used on various railways in the past which should hardly have taken three years to "design."

At the naming ceremony I believe Mr. Barnes remarked that "this locomotive would show the world that we were still in the forefront of steam locomotive design." This is probably true, as is also the fact that every other highly-developed country has ceased to consider steam traction for traffic densities similar to our main lines.

No determined effort is being made to combat the falling traffic and rising costs, which can be done only by getting away from our so-called "traditional" methods. The immediate problem is to move all traffic, both passenger and particularly freight, more quickly and cheaply. This can be done only by large-scale electrification on the lines of the Weir Report.

In view of this and of the fact that ample stocks of serviceable steam locomotives exist, I regard it as highly irresponsible to spend money on large numbers of standard locomotives, apparently for window-dressing purposes.

All capital and works capacity available for renewals should be spent on electrification works and on fitting all wagons now building, including mineral, with continuous brakes so that full use may be taken of the speed and power available from such electrification.

Yours faithfully,

NOEL DUDLEY

48, Mount Road, Hayes, Middlesex

French High-Speed Running

February 19

SIR,—In reply to Monsieur Feyeux's letter in your February 16 issue, I should like to point out that the aggregate mileages quoted in the article "British and French Passenger Services," in your issue of December 8, 1950, represented the totals for each region of individual start-to-stop runs scheduled at or above the speed levels specified. The following start-to-stop runs scheduled at 60 m.p.h. and over were included in the S.N.C.F. Summer 1950 timetable for the Northern Region.

From	To	Train		Distance	Time	Speed	Traction
		Time	No.	Miles	Min.	M.p.h.	
St. Quentin	Paris	19.32	190	95.1	85	67.1	Diesel
Paris	Amiens	11.30	319	81.2	73	66.8	"
Paris	Arras	17.15	333	119.4	108	66.3	"
Arras	Paris	19.42	340	119.4	108	66.3	"
Arras	Amiens	11.47	320	42.3	39	65.1	"
Amiens	St. Quentin	06.50	155	95.1	88	64.8	"
Amiens	Paris	12.29	320	81.2	76	64.2	"
Amiens	Arras	12.46	319	42.3	41	61.9	"
Aulnoye	St. Quentin	18.53	190	38.9	30	61.4	"

The aggregate mileage of these runs is 714.9 miles.

In the runs referred to in Monsieur Feyeux's letter, sections scheduled at start-to-stop speeds of less than 60 m.p.h. are included, i.e. Arras-Douai and Douai-Lille, on the Paris-Lille run, also the St. Quentin-Jeumont and Jeumont-Aulnoye sections of the Paris-Jeumont run.

The 60 m.p.h. steam-hauled runs between Paris and Aulnoye were not included in the 60 m.p.h. figures, as the Aulnoye stop is not advertised; the trains concerned are publicly booked non-stop from Paris to Quévy (145.8 miles) in 150 minutes down and 152 minutes up, at 58.3 m.p.h. down and 57.5 m.p.h. up. These runs were, however, included in the totals at 58 m.p.h. and 55 m.p.h. and over respectively in your article.

Yours faithfully,

GEORGE W. CARPENTER

6, Oak Villas, Manningham, Bradford

"Modernising" the "Canterbury"

February 23

SIR,—I was dismayed, when going over to Paris last week by the "Golden Arrow," to be informed at Dover that it is the intention of the Marine Department of British Railways to "modernise" the external appearance of the cross-Channel steamer *Canterbury*. I understand that this modernisation will consist in giving her a squat, streamlined funnel and the ugliest masts available.

Is it possible that people can be so foolish? For her size the *Canterbury* is one of the most imposing and beautiful vessels afloat. She has been universally acclaimed as a "good-looker," and is the unchallenged favourite of sailors and longshoremen, as well as innumerable travellers, in the Straits of Dover. With her lofty and imposing funnel and high masts the *Canterbury* never fails to make a striking impression on all who see her. Now she is to be reduced to a squat and ungainly-looking hybrid; her masts and funnel will be out of conception with her hull and superstructure.

May one not hope that even at this late hour wiser counsels will prevail, and that this famous and beautiful vessel may be saved from such a fatuous desecration?

Yours faithfully,

HENRY MAXWELL

164, Ashley Gardens, S.W.1

THE SCRAP HEAP

Stranger than Fiction

Enquirers for British Railways time-tables in some public reference libraries are reported recently to have been directed to the fiction shelves.

Scottish Christmas Trees Revenue

The Christmas tree displays on behalf of local hospitals and various charitable organisations featured by the Scottish Region of British Railways at some of its principal stations again met with generous response from the public. The contributions reached the satisfying total of £1,301 2s. in cash and 4,925 books and other gifts. Among the stations taking part Aberdeen contributed £209 and 836 gifts; Dundee West £164 (593); Edinburgh Waverley (West End) £64, and Edinburgh Waverley (East End) £143, with a total of 852 gifts; Edinburgh Princes Street £175 and 537 gifts; Glasgow Central £314 (1,717); Glasgow Queen Street £161 (290); and Glasgow St. Enoch £71 and 100 gifts.

The F.T. & O.P.R.

In our issue of December 22, 1950, there was a paragraph in the Scrap Heap page relating to a £12,000 company, called S. & B. Miniature Railways, formed to run a 15 in. gauge miniature railway—with three stations—in Battersea Park during the Festival of Britain. This will be known as the Far Twittering & Oyster Perch Railway and has been designed by cartoonist Rowland Emmett with coaches and locomotives in typical Emmett style. Three engines, *Nelly*, *Neptune*, and *King George III*, will be built, and in the photograph reproduced below *Nelly* is seen taking Stockport residents for a trial run. The

top of the engine smoke stack was originally a brass plant pot at Lowther Castle.

Passionate Anonymity

Mr. Justice Stable said at York Assizes recently that he would like to see the names of railway stations in bigger letters. "I constantly deplore the passionate anonymity displayed by railway stations in this island. It makes travelling infinitely more interesting and educational, even in an express train, if you can clearly read the names of the stations that you go through. There is not a single soul who has ever travelled by train who has not experienced difficulty in discovering where he or she has got to go from time to time."—From *"The Daily Telegraph."*

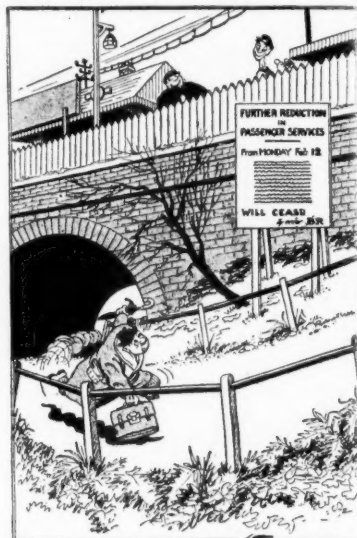
Dignity of the Hat

Two months ago a student's hat blew on to the line at Stuttgart Station, in front of an engine. The engine braked sharply and the hat was untouched. Yesterday 200 students presented the driver and fireman of the engine with a certificate of "careful driving" for "respecting the dignity of the human hat."—From *"The Daily Graphic."*

Alsations Hunt Train Raiders

A team of trained Alsations has started work at sidings, marshalling yards and goods yards in the London area. They are being introduced to help cut down thefts from trains and will work with individual constables. Each dog is capable of tackling any intruder, either by jumping on his back, running between his legs to trip him, or bringing him down with a rugby tackle.—From the *"Evening Standard."*

LONDON LAUGHS (No. 4,975) By LEE



"Come on, Mr. Perks, You're doing better this morning . . . Just missed one that ain't been!"

(From *"The Evening News"*)

That's the Ticket

Friends abroad, if you are smitten
With the urge to join the fun
At the Festival of Britain
Here in nineteen-fifty-one,
Pay no heed to idle stories
That have reached your ears,
perchance,
Of our railways' faded glories
And their servants' nonchalance.

Porters all will vie to serve you,
Clerks will help you all they can;
Guards will watch, outside your pur-
view,
Your portmanteaux in the van.
Stationmasters will befriend you
With a zeal that never fades;
And in buffets, to attend you,
Will be smiling Abigail.

Waiting-rooms will all be spotless,
Warm and restful, brushed and
bright,
And compartments will be not less
To your liking, day and night.
From Balmoral down to Bristol
And from Shrewsbury to Sheen,
Carriage windows, clear as crystal,
Will reveal the passing scene.

Yes, our railways will convey you
With all promptitude and care,
And if ever they delay you
It will only happen where
You can find exhilaration
In a memorable view,
Such as dawn on Preston Station
Or the twilight hour at Crewe.

A. C. G.

From *"The Manchester Guardian."*



Trial trip of one of the Emmett trains which will be run at Battersea Park during the Festival of Britain (see paragraph above)

OVERSEAS RAILWAY AFFAIRS

(From our correspondents)

NEW ZEALAND

Electrification Approved

The electrification proposals for the North Island Main Trunk line have been approved in principle by the Government. If world conditions permit, the first section, from Papakura to Frankton, is expected to be completed by March, 1955.

Electrification of the line will save, on a present-day basis, £900,000 a year, and the import of 52,000 tons of coal and 71,000 tons of oil, will ease staff problems, give greater carrying capacity and provide a cleaner, better, and more modern service. There will be no drain on the electric power resources of the North Island until 1955. By then it is expected that additional demands can be met. The power required to operate the whole of the electrified Auckland-Wellington line will be under 30,000 kW., the output of one generating unit at a major power scheme.

Problems associated with the electrification of the Main Trunk line were recently examined by two Swedish experts, Messrs. Th. Thelander and Erik D. Edinius, who confirmed earlier proposals made by the General Manager, Mr. F. W. Aickin. The experts were satisfied that the complete electrification of the line was justified and would bring about substantial economies. They recommended that the electrification should be carried out on a single phase, 16½ cycles, 16,000 volts alternating current system, developed in Sweden and operated there satisfactorily for 35 years.

WESTERN AUSTRALIA

New Line and Yards near Perth

In the 1950 Parliamentary session Bills were passed for the construction of a line from Welshpool to Bassendean (east of Perth) and authorising the payment of additional compensation for land to be taken for the new Bassendean marshalling yard.

The existing site of the marshalling and goods yards in the centre of Perth has long been criticised by town planners. The effect of the comparatively wide strip of railway land between East Perth and West Perth has been to retard the development of the city towards the north. The goods yards have tended to concentrate heavy traffic movement within the city area, with consequent congestion of inadequate streets.

From the railway viewpoint, the marshalling yards at Perth, and the layout of lines converging in the heart of the city from the east and the south west, necessitate sorting at Perth much freight traffic which is destined for country centres and might be more conveniently marshalled outside the city.

Before there can be an alteration in the layout within the city, it is necessary that provision should be made to

handle elsewhere the traffic at present dealt with in the Perth railway yards. As a preliminary, it is proposed that the Perth goods yards be transferred to railway-owned land at East Perth, that the marshalling yard and locomotive depot be established at Bassendean, and that the South Western Railway be linked directly to the new marshalling yard by a chord line from Welshpool to Bassendean, approximately 6½ miles.

This chord line will enable traffic to flow freely from the South Western area to the Eastern, Northern and Southern areas, and *vice versa*, without, as now, entering Perth. It will mainly traverse an area of unimproved land, and interfere with fewer than 30 houses.

Although construction may be deferred, land for the line will be taken.

SOUTH AFRICA

Goods Traffic

The total quantity of goods conveyed by rail during the first six months of the current financial year (April-September, 1950), was 31,258,500 tons, exceeding the total for the corresponding period of the previous year by 1,184,000 tons. Although the tonnage increased, there was a reduction in train and engine miles run, indicating increased efficiency in loading and operating.

Coal hauled during the week ended December 23, 1950, amounted to 440,600 tons, an increase of 14,400 tons over the corresponding week of the previous year. In moving 22,217,900 tons of coal in 1950, the railways improved on the total for 1949 by 905,700 tons. The transport of coal by rail for local consumption in the Union showed an increase of 816,300 tons over the previous year. Revenue from coal traffic during the financial year ended March, 1950, was £7,947,700, an increase over the previous financial year of £1,094,800. In 1949-50 the Transvaal collieries sent by rail 15,967,237 tons of coal; Natal collieries, 4,707,397 tons; and Orange Free State collieries, 974,291 tons.

In the week ended December 23, 1950, manganese ore sent by rail totalled 19,100 tons, and chrome ore, 12,100 tons. In the calendar year 1950, 803,000 tons of manganese were moved by rail from the mines, mainly for export. The increase over 1949 amounted to only 21,000 tons but was considered satisfactory in view of the heavy general demands made on wagon resources during that year. Chrome moved by rail in 1950 amounted to 530,000 tons, an increase over the previous year of 140,000 tons.

In 1949-50 agricultural products transported amounted to 10,215,495 tons, and iron ore conveyed to foundries and factories, 1,227,693 tons. The amount of copper hauled by rail has steadily increased from 28,939 tons

in 1946-47 to 142,063 in 1949-50. A remarkable increase has been recorded in the transport of petrol aviation spirit, power paraffin, and other similar products; in 1945-46 the railways carried 139,025,222 gal. of these commodities, and in 1949-50, 298,746,000 gal.

IRELAND

Through G.N.R.—C.I.E. Working

For the first time since the beginning of the C.I.E. strike, on December 17, a through special train ran from the G.N.R. to the C.I.E. It was the 11.10 a.m. restaurant car special from Belfast to Lansdowne Road, Dublin, in connection with the Ireland-England Rugby International on Saturday, February 10. Arrangements had been made for a similar train to run through to Lansdowne Road in connection with the Ireland-France match on January 27, but this had to be cancelled and the train instead ran to Amiens Street, Dublin, G.N.R.

For the Ireland-England match on February 10, there were two special trains from Belfast to Dublin in addition to the through restaurant train already mentioned. More than over 2,500 used the ordinary service and the special trains. On Wednesday, February 7, through running was resumed by the "Enterprise" trains between Belfast and Cork, suspended since the strike.

FRANCE

More Couchette Services

Night travel has been improved in the past two years by the introduction on the French National Railways of more couchette and sleeping car services. In 1949, for example, 124 first (four-berth compartment) and 61 second class (six-berth compartment) couchette services were run every night. In 1950 this was increased to 230 first and 124 second class—very nearly double the number. It is hoped in 1951 to increase the services further.

Protection of Goods in Transport

The S.N.C.F. is continuing to improve the package of goods for transport and thus reduce claims for damages. In a recent statement, Monsieur Texte, commercial Service Inspector, explained that a laboratory was organised in 1946 to carry out scientific tests of packages adapted to protect goods. Within the last year, two hundred package firms had been officially approved by the S.N.C.F. These firms delivered package material marked with the S.N.C.F. stamp, which enabled consignors to benefit by special transport rates and thus induced them to use the improved packages.

A shock-absorber to protect fragile goods, invented by two railwaymen, has been constructed as a prototype by the S.N.C.F. The wagon, on which it was

fixed, was subjected to buffer shocks at 8 to 12 m.p.h., but the device and its contents arrived intact. Both heavy and light fragile loads were tested.

The shock-absorber apparatus comprises a part fixed on a flat wagon consisting of two rails each in the form of a wide-open V and two horizontal beams acting as guide brakes, and a mobile part or cradle carrying the goods, mounted on four small wheels running on the rails, equipped with powerful springs attached to brake shoes. When the wagon is subjected to shock or variation of speed, the mobile part is set in motion upward on the rails. Its kinetic energy then takes the form of about 15 per cent. potential energy and 45 per cent. compression of springs; the remaining 40 per cent. is spent in heat by friction on the guide brakes. Under the force of the

springs and gravity the mobile part moves downward and then oscillates till its return to the lowest part of the rails.

JUGOSLAVIA

Traffic with Greece Resumed

An agreement on resumption of railway traffic between Yugoslavia and Greece was signed in Belgrade on February 12, and the first trains crossed the frontier on the Belgrade-Salonica-Athens main line on February 15, between the Yugoslav frontier station of Djevdjelia and the Greek station of Idomeni. Normal international connections by this route had ceased in April, 1941, but during the occupation of Greece by the Germans, this was their railway line of communication with their bases in Central Europe until

1944, when, after the German collapse, all railway traffic ceased between Yugoslavia and Greece. For the time being, there will be one local passenger train daily each way in either country as far as the frontier; at Djevdjelia, passengers from either direction have to change.

Jugoslavia can now route part of its imports (mainly intended for its south-eastern and eastern regions) and exports through Salonica, where the port includes a Yugoslav free zone. For Greece, the revived route means the re-establishment of direct railway connection with western and central Europe. Until 1939, the line now re-opened was the route of the thrice-weekly Athens branch of the "Simplon-Orient Express," linking up with the main (Paris-Istanbul) train at Nish, 151 miles south of Belgrade.

Publications Received

Oxford Junior Encyclopædia. Volume IV: Communications. London: Oxford University Press, Amen House, Warwick Square, E.C.4. 10 in. × 7½ in. × 1½ in. 496 pp. Illustrated. Price 30s.—This volume forms part of a series of twelve, of which five have so far been published. The sub-title is used in the widest sense, to cover language, books, periodicals, broadcasting, and travel. Railways are well represented under such headings as diesel locomotives; gauges; railway speed records; and train control—sufficient indication of the ground which this well-produced volume covers. There are many half-tone and black-and-white illustrations, and also a number of fine colour plates.

Ceylon.—An illustrated handbook of information published by Thos. Cook & Son Ltd., for visitors to Ceylon contains some useful railway information, with mention of the new diesel tourist saloon of the Ceylon Government Railway, in addition to many items of interest for tourists and sportsmen.

Holidays Abroad, 1951.—A wide variety of Continental holidays is offered by the programmes of Thos. Cook & Son Ltd., *Holidays in France* (with Corsica), including Paris, the French Alps, the Vosges, the Pyrenees, Auvergne, Touraine, and coast resorts of all kinds, are described in the separate programme for that country; this includes also motor-coach within, and touching, France and yachting holidays on the Seine. Austria and Germany also share a programme to themselves: in Austria, there are holidays to be had in Vorarlberg and Styria, as well as in more frequented districts; and in Germany, besides the Rhine and Black Forest, Bayreuth and Nuremberg and the Lake of Constance are once more available to British and other holidaymakers. Walking holidays in Switzerland, Austria, the Rhineland, and Norway are the subject of a special programme. Motorcoach tours are listed

in yet another programme, in or through France, Switzerland, Italy, Austria, Germany, Scandinavia, and Spain.

Holidays in Britain, 1951.—Most parts of the British Isles and Channel Islands are included in the inclusive tours programme of Thos. Cook & Son Ltd., which covers districts as diverse as Jersey, Connemara, Donegal, Skye, and Shetland, besides a large number of seaside and inland resorts nearer home. Motorcoach tours in Great Britain are the subject of a separate illustrated programme.

Ireland by C.I.E.—Coras Iompair Eireann has brought out a folder listing its motor coach and "go-as-you-please" train and bus tours for this summer. The motor coach tours, for which application should be made to the Manager, C.I.E. Road Passenger Services, 59, Upper O'Connell Street, Dublin, are for six, nine, and eleven days, and range in price from £16 to £32. A specimen £16 tour includes Glendalough, Cork, Killarney, and Limerick. The "go-as-you-please" tours are arranged by the Commercial Superintendent, C.I.E., Kingsbridge Station, Dublin. Tickets are valid for three months. Standard summer tours may be undertaken, or the traveller may plan his own tour at any season.

Properties and Applications of Permalin.—A brochure describing the applications of Permalin, which is a densified wood laminate fully impregnated with synthetic resin, has been issued by the New Insulation Co. Ltd., 54, Victoria Street, London, S.W.1. The method of building up laminations of the different types, depending on the purpose for which the material is required, is illustrated by diagrams, and the sizes in which it can be supplied are shown. Also given are the mechanical characteristics and electrical and physical properties of Permalin. These also are illustrated by diagrams. The material covers a wide application range, including, among others, track circuit and

trolley wire installation, electrical apparatus, silent gears, foundry patterns, and core boxes.

Visco Unit Dust Collectors.—The Visco Engineering Co. Ltd., Stafford Road, Croydon, has issued a revised illustrated booklet containing descriptive matter relating to the firm's unit dust collectors for use with grinding and polishing machines. The brochure also contains dimensioned diagrams of typical layouts which will be of interest to potential users.

Heavy-Duty Lifting Magnets.—Illustrated information regarding the application of Rapid heavy-duty lifting magnets is contained in leaflet No. 116 published by the Rapid Magnetising Machine Co. Ltd., Lombard Street, Birmingham. Technical data and dimensions are given as well as a specification applicable to Rapid lifting magnets of varying capacity.

Better Castings.—An illustrated booklet, containing examples of the application of Meehanite metals in engineering, has been published by the International Meehanite Metal Co. Ltd., 66, Victoria Street, London, S.W.1. The booklet also contains physical properties relative to requirements for specific purposes, and the effect of heat treatment on various Meehanite metals, and a list of licensees, associated companies and agents throughout the world.

Chaseside Mechanical Equipment.—An illustrated brochure dealing with mobile mechanical equipment, which includes mechanical shovels and cranes, has been published by Chaseside Engineering Co. Ltd., Station Works, Hertford. The brochure has been prepared specifically for the Canadian customer and gives the capacities of various designs of equipment together with a description of the work for which they are suitable. The associated firm in Canada is the Chaseside Engineering Co. (Canada) Ltd., 503, Terminal Building, Toronto, Ontario.

Western Region Gas-Turbine-Electric Locomotive in Service

Performance in passenger service of No. 18000 with special reference to starting acceleration and hill-climbing ability

By Cecil J. Allen, M.Inst.T.

WHILE no details have yet been made public as to the fuel consumption and running and maintenance costs of the Western Region gas-turbine-electric locomotive No. 18000, from observation of work on the road it is clear that her capabilities are of an exceptional order. As the power output goes up in steps, according to the particular notch to which the controller has been moved, it is not possible to adjust output to demand with quite the same precision as is normal with a steam locomotive of, say, the "King" or "Castle" class, on which drivers are accustomed to vary their cut-off percentages by no more than 2 per cent. or so at a time.

For this reason there are times when the running of No. 18000 appears a little patchy, but this is simply because running within the last notch or two of full throttle may result in too much time being gained, whereas the next lower notch may not provide quite sufficient power for timekeeping. Unless it is necessary to regain time lost by late starts or signal or permanent way checks, therefore, much of the running behind the locomotive alternates between exceptional efforts, relatively to those of normal steam locomotive performance—especially in starting from rest and up steep gradients—and pronounced easings of the locomotive to observe point-to-point timings as closely as possible.

Trains Normally Worked

The majority of the passenger running with the gas-turbine-electric locomotive has been on the 3.30 p.m. express from Paddington to Plymouth, on Mondays and Wednesdays, returning with the 7.15 a.m. from Plymouth to Paddington on Tuesdays and Thursdays; the 11.15 a.m. from Paddington to Bristol on Fridays, returning with the 4.15 p.m.; and the 9.5 a.m. to Bristol on Saturdays, returning with the 1.50 p.m. The 3.30 p.m. from Paddington has one of the fastest schedules on the Western Region, as it is booked over the 142.7 miles to Taunton in 148 min., at 57.8 m.p.h. from start to stop.

Table 1 gives details of a run on the last-named express, on which eleven coaches were taken out of Paddington with a tare weight of 363 tons and a gross weight of 380 tons. With such a load, the acceleration out of the terminus in the writer's experience was unprecedented, for a speed of 60 m.p.h. was attained in 5½ miles, and Southall, 9.1 miles from Paddington, was passed in 10 min. 48 sec. From here, there were alternations of fast running and of easing, and not until Castle Cary was the locomotive opened out rather more vigorously; the undulating 19.5 miles from Castle Cary to Athelney were run in 16 min 37 sec., with a maximum

speed of 80 m.p.h. at Curry Rivell Junction. Cogload box, 138.0 miles from Paddington, was passed in 138 min. 30 sec., and Taunton was reached in 145 min. 17 sec., after a very slow approach.

A coach had been slipped at Heywood Road Junction, Westbury, and it was with the remaining 10-coach load of 327 tons tare and 345 tons gross that the notable start from Taunton, set out in Table 1, was made. Attaining 58½ m.p.h. in 2 miles to Norton Fitzwarren, No. 18000 climbed to Welling-

14 min. 5 sec. with a 360-ton train; and with a "Star" class 4-6-0, lightly loaded to 260 tons only, 13 min. 23 sec.

From Exeter No. 18000 went forward with six coaches only, of 201 tons tare and 215 tons gross, and made the surprising ascents of Dainton and Rattery banks which also are given in detail in Table 1. The train had been taken cautiously through Newton Abbot at 35 m.p.h., and the locomotive was then opened out to such effect that in 1½ miles speed had risen to 60 m.p.h. (the final acceleration from 56 to 60 m.p.h. was up 1 in 90); up a mile at 1 in 57.46-56 the minimum was still 50½ m.p.h.; and the final mile, which includes a short strip of gradient as steep as 1 in 36, brought the speed down to 41 m.p.h. The time of 3 min. 22 sec. for the 2.8 miles from Aller Junction to Dainton box represents an average speed of all but 50 m.p.h. up this most formidable incline. The ascent of Rattery bank was not quite so spectacular, though a mile at 1 in 68 and 1½ miles at about 1 in 50 were climbed at between 46 and 39½ m.p.h., and there was an acceleration to 49½ m.p.h. on the ensuing 1 in 90.95-65 to Rattery box. This made a total of 6 min. 11 sec. for the 4.5 miles from Totnes to Rattery and an average speed of 43.7 m.p.h.

Exceptional Hill Climbing

In the reverse direction, the next morning, also in fine weather, there was the record-breaking climb of Hemerdon bank, shown in Table 2. With its 2½ miles continuously at 1 in 41.42, in its concentrated demand on the locomotive

TABLE 1—3.30 p.m. PADDINGTON-PLYMOUTH

Running times and speeds on principal banks

Wellington Bank

Load : 10 = 327 tons tare, 345 tons gross

Miles		min. sec.	m.p.h.
0.0	TAUNTON ...	00 00	—
2.0	Norton Fitzwarren...	3 41	58½
3.0	Victory Siding ...	4 43	59
5.7	Poole Siding ...	7 31	58½
7.1	Wellington ...	8 54	60
7.9	Milepost 171 ...	9 40	—
8.9	" 172 ...	10 44	56½
9.4	" 172½ ...	11 18	—
9.9	" 173 ...	11 53	51
10.9	Whiteball (174) ...	13 10	43½

Dainton Bank

Load : 6 = 201 tons tare, 215 tons gross

Miles		min. sec.	m.p.h.
0.0	NEWTON ABBOT ...	10 00.0	35.0
1.1	Aller Junction ...	1 34.0	—
1.4	Milepost 215½ ...	2 09.8	53.8
1.65	" 215½ ...	24.8	56.3
1.9	" 216 ...	40.8	56.3
2.15	" 216½ ...	58.2	51.7
2.4	" 216½ ...	3 15.2	52.9
2.65	" 217 ...	33.0	50.6
2.9	" 217½ ...	51.8	47.9
3.15	" 217½ ...	4 12.2	44.1
3.4	" 217½ ...	34.2	40.9
3.65	" 217½ ...	56.0	41.3
3.9	Dainton (218) ...	—	—

Rattery Bank

Load : 6 = 201 tons tare, 215 tons gross

Miles		min. sec.	m.p.h.
0.0	TOTNES ...	10 00.0	45
0.6	Milepost 223½ ...	51.2	—
1.1	" 224 ...	1 30.2	46.2
1.6	" 224½ ...	2 11.4	43.7
2.1	" 225 ...	55.0	41.3
2.6	Tigley (225½) ...	3 40.6	39.5
3.1	Milepost 226 ...	4 24.2	41.3
3.6	" 226½ ...	5 04.0	45.2
4.1	" 227 ...	41.8	47.6
4.5	Rattery Box ...	6 11.0	—
4.6	Milepost 227½ ...	18.2	49.6
6.8	BRENT ...	9 06.0	—

* From dead start. † Passing time. ‡ Speed restriction. § Eased to avoid slipping in Whiteball Tunnel

ton, up grades largely at 1 in 203 to 1 in 170, at a steady 58½-60 m.p.h., and at the top of 2½ miles at 1 in 90.80 to the tunnel mouth speed had not fallen below 51 m.p.h. when there was a deliberate easing to avoid slipping in the tunnel. This gave the exceptional time of 13 min. 10 sec. from Taunton start to passing the summit box at Whiteball, 10.9 miles. The nearest approach that the writer can trace to such a performance, with a 4-6-0 "King," is a time of

TABLE 2—7.15 a.m. PLYMOUTH-PADDINGTON

Running times and speeds on Hemerdon bank

Load : 6 = 200 tons tare, 210 tons gross

Miles		min. sec.	m.p.h.
0.0	PLYMOUTH ...	10 00.0	—
4.0	Plympton ...	6 p.w.s.	36.0
4.45	Milepost 241½ ...	7 05.8	56.3
4.7	" 241½ ...	23.0	57.0
4.95	" 241 ...	41.0	52.3
5.2	" 240½ ...	59.8	50.0
5.45	" 240½ ...	8 20.2	47.9
5.7	" 240½ ...	40.8	44.2
5.95	" 240 ...	9 02.0	43.7
6.2	" 239½ ...	23.8	42.5
6.45	" 239½ ...	45.4	41.3
6.7	Hemerdon (239½) ...	10 06.4	41.7

* From dead start. † Passing time

this is actually the hardest of the South Devon banks, and whereas before the war the sharp descent from Mutley Tunnel to Laira Junction gave a good impetus for the climb to eastbound trains, much of this is now lost by a permanent speed restriction over a bridge near Tavistock Junction. On the morning in question, No. 18000 was duly slowed down to 36 m.p.h. for the bridge, and was then opened out to reach 57 m.p.h. in the next 2 miles, first level for

$\frac{1}{2}$ mile, and then gradually steepening from 1 in 264 to 1 in 41. Speed then fell steadily on the 1 in 41-42, until the curve of speed flattened out $\frac{1}{2}$ -mile from the summit, with the rate maintained at 41 m.p.h.

Even with allowance for the light load of six coaches (210 tons), a minimum of over 40 m.p.h. at the summit of Hemerdon bank, and a time of 10 min. 6 $\frac{1}{2}$ sec. from North Road station start to Hemerdon box were both, in the writer's experience, unprecedented performances. An unusually fast time recently recorded by Mr. H. J. Stull with a "King" class 4-6-0 and one coach more (233 tons tare and 245 tons gross) was 12 min. 10 sec., with a speed of 47 m.p.h. through Plympton and a minimum of 23 $\frac{1}{2}$ m.p.h. at Hemerdon box; but the "King" took 5 min. 7 sec. from Plympton to Hemerdon as compared with the 3 min. 28 $\frac{1}{2}$ sec. in the case of the gas-turbine-electric locomotive.

It is of interest to note, in connection with the high tractive effort developed by No. 18000, without any apparent slipping in starting on these steep inclines, that the weight of the engine available for adhesion—77 $\frac{1}{2}$ tons—exceeds the adhesion weight of a "King" by no more than 10 tons. In total weight, however, the 135 $\frac{1}{2}$ tons of the "King" in working order, engine and tender, compares with the 113 tons only of No. 18000.

On the continuation of the same run, the easy timing of the 7.15 a.m. from

summit (up gradients from 1 in 98 to 1 in 81) at a lowest speed of 53 m.p.h., and reached Westbury, 47.3 miles, in 46 min. 34 sec. start-to-stop, recovering 5 $\frac{1}{2}$ min. of a late start, as shown in Table 3.

From Westbury No. 18000 maintained a minimum speed of 58 $\frac{1}{2}$ m.p.h. up the 6 miles at 1 in 222 to Patney, cleared Savernake summit, 25.5 miles, in 27 min. 3 sec., and with very moderate downhill speeds passed Reading, 59.6

stretch was from Castle Cary to Curry Rivell Junction, 15.6 miles in 12 min. 45 sec., with a maximum of 85 m.p.h. The 142.7 miles from Paddington to Taunton were covered in 148 min. 22 sec. or 143 $\frac{1}{2}$ min. net, but there were pronounced easings of the locomotive at various points, and even with this load a considerably faster time could have been achieved on this stretch, had this been necessary.

Table 5 illustrates the exact precision of speed that can be obtained with No. 18000 on a level course such as that between Paddington and Swindon. Despite permanent slowings out to Acton, and an easing through Slough, the 9.5 a.m. from Paddington had been run to Reading, 36.0 miles, in 39 min. 28 sec. From Reading the locomotive made an unusually slow start, but a speed of 71 m.p.h. was reached on the level by Cholesey, and up the very gradual 1 in 754 from there to Shrivensham a rate of 66 to 68 m.p.h. was kept up unvaryingly. There was a slight easing to 60 through Swindon, and an acceleration to 78 m.p.h. down

TABLE 4—3.30 p.m. PADDINGTON-PLYMOUTH (SUNDAYS)

Load : 13 = 430 tons tare, 470 tons gross

Miles		min. sec.	m.p.h.
0-0	READING ...	0 00	—
1-9	Southcote Junction ...	4 09	47
5-3	Theale ...	7 57	57
8-8	Aldermaston ...	11 28	62
10-8	Midgham ...	13 24	62
13-6	Thatcham ...	16 13	64
17-1	NEWBURY ...	19 40	61
18-2	Enborne Junction ...	20 46	59
22-5	Kintbury ...	24 55	64
25-5	Hungerford ...	27 55	61
30-4	Bedwyn ...	32 48	60
34-1	SAVERNAKE ...	36 48	52
36-5	Wootton Rivers ...	39 13	68
39-3	Pewsey ...	41 35	73/76
42-9	Woodborough ...	44 29	72
45-1	Patney ...	46 18	76
50-9	Lavington ...	50 54	84
55-4	Edington ...	54 16	71
58-5	Heywood Road Junction* ...	57 27	—
59-6	WESTBURY ...	59 36	—

* Speed restriction

miles, in 60 min. 35 sec.; but for signal checks the 95.6 miles from Westbury to Paddington would have been run in 96 $\frac{1}{2}$ min., a further gain of 10 $\frac{1}{2}$ min. on schedule.

Table 4 gives details of a run (timed by Mr. C. H. H. Harwood), on which a late start of the Sunday 4.18 p.m. from Reading gave justification for a very smart run to Westbury. On this occasion No. 18000 was hauling a 13-coach train of 430 tare tons weight, and as a full train complement included standing passengers, the gross weight was probably 470 tons. The gradually rising grades of the Kennet valley were surmounted at an even speed varying between 59 and 64 m.p.h. as far as Bedwyn, and the lowest rate on the last 3 miles to Savernake—2 miles at 1 in 180 and a mile at 1 in 145-106—was 52 m.p.h.

Then came a very fast descent to Westbury, with the 18.9 miles from Wootton Rivers to Edington covered in 15 min. 3 sec., and a maximum speed of 84 m.p.h.; Edington, 55.4 miles from Reading, was passed in 54 min. 16 sec., and Westbury, 59.6 miles, was reached in 59 min. 36 sec., start to stop. This time represented a gain of 18 $\frac{1}{2}$ min. on the easy Sunday schedule. As all the lost time had now been regained, no further effort on the same scale was needed.

Maximum Speed Capacity

As evidence of the maximum speed capacity of No. 18000, Mr. J. H. Mortimer has recorded a run on which the gas-turbine-electric locomotive was loaded to 444 tons tare and 475 tons gross out of Paddington on the 3.30 p.m. express, and reached a top speed of 89 m.p.h. at Lavington. Another very fast

TABLE 5—9.5 a.m. PADDINGTON-BRISTOL

Load : 9 = 299 tons tare, 310 tons gross

Miles		min. sec.	m.p.h.
0-0	READING ...	0 00	—
2-6	Tilehurst ...	5 14	50 $\frac{1}{2}$
5-5	Pangbourne ...	8 10	63 $\frac{1}{2}$
8-7	Goring ...	11 05	68 $\frac{1}{2}$
12-5	Cholesey ...	14 18	71
17-1	DIDCOT ...	18 22	69
20-5	Stevenston ...	21 21	66 $\frac{1}{2}$
24-4	Wantage Road ...	24 49	68
27-9	Challow ...	27 57	66
30-5	Uffington ...	30 26	66 $\frac{1}{2}$
35-6	Shrivensham ...	35 00	68
41-3	SWINDON ...	40 16	60
46-9	Wootton Bassett ...	45 41	66 $\frac{1}{2}$
51-7	Dauntsey ...	49 55	78
53-9	Christian Malford ...	51 50	68 $\frac{1}{2}$
58-0	CHIPPENHAM ...	55 49	57
62-3	Corsham ...	60 35	53 $\frac{1}{2}$
65-9	Box ...	64 03	70 $\frac{1}{2}$
68-6	Bathampton ...	66 27	69
70-9	BATH ...	69 25	—

Dauntsey bank, after which the engine was eased more severely; even so, the 70.9 miles from Swindon to Bath were completed in 69 min. 25 sec., a gain of 4 $\frac{1}{2}$ min. on schedule.

Keeping to Schedule

Many of the foregoing performances would have been within the capacity of a "King" or "Castle" 4-6-0 in good condition, and with good quality coal, but as on most of the runs the gas-turbine-electric locomotive was deliberately eased to avoid being too far ahead of schedule, it has yet to be seen what the possibilities of No. 18000 would be if the locomotive were fully extended over the entire length of a long-distance run. On the journey to Plymouth which was first described, the maintained speeds show that No. 18000 would have had no difficulty in working her load (380 tons to Westbury and 345 tons beyond) to Exeter, 173.5 miles in about 166 min. On the extremely steep South Devon banks the locomotive appears to have a definite advantage over anything previously achieved with steam power.

TABLE 3—7.15 a.m. PLYMOUTH-PADDINGTON

Load 10 = 324 tons tare, 345 tons gross

Miles		min. sec.	m.p.h.
0-0	TAUNTON ...	0 00	—
4-7	Cogload ...	6 18	64
8-0	Achelrey ...	9 09	70 $\frac{1}{2}$
11-9	Curry Rivell Junction ...	12 28	75
17-2	Somerton ...	16 51	69/73
20-5	Charlton Mackrell ...	19 39	74 $\frac{1}{2}$ 68
22-7	Keinton Mandeville ...	21 31	71 $\frac{1}{2}$
25-4	Alford ...	23 48	74
27-5	Castle Cary ...	25 54	*60
31-0	Bruton ...	29 15	59/51
34-3	Milepost 122 $\frac{1}{2}$ (summit) ...	32 47	53
36-3	Witcham ...	34 47	65 $\frac{1}{2}$
40-2	Blatchbridge Junction ...	38 21	73 $\frac{1}{2}$
42-4	Clink Road Junction ...	40 09	60
45-7	Fairwood Junction ...	43 35	*32
47-3	WESTBURY ...	46 34	—

* Speed restriction

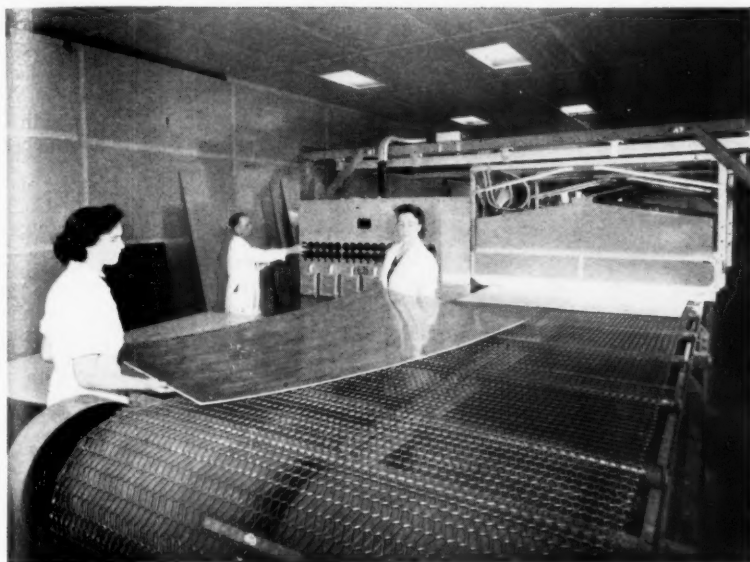
Plymouth made it necessary constantly to ease the locomotive to avoid running too much ahead of time. The only other performance of note was the start from Taunton, now with ten coaches of 324 tons tare and 345 tons gross weight. From the start to Castle Cary, 27.5 miles, took 27 min. 31 sec., with a minimum speed of 59 m.p.h. up 4 $\frac{1}{2}$ miles at 1 in 264 to Somerton Tunnel.

Mile-a-Minute Runs

On another run with the same train and load, timed by Mr. Humphrey Baker, No. 18000, after attaining a speed of 75 m.p.h. at Curry Rivell Junction, surmounted the same bank at a minimum of 69 m.p.h., passed Castle Cary in 25 min. 54 sec., climbed to Brewham

Laminated Veneers for Rolling Stock

A liquid plastic spray which leaves a fire-resistant surface



Panelling being removed from the conveyor belt after drying

THE use of laminated veneered plywood as a decorative medium for the interior of railway passenger coaches, restaurant cars, and road transport passenger vehicles has been the accepted practice for a number of years. It has the advantages of saving in weight, and since the panels are retained in position by mouldings, they can be easily removed for re-polishing when stock is in workshops for periodic overhaul. Similarly, individual panels which have been damaged in service can also be replaced, in many instances without disturbing entire partitions.

The erection of the bodywork is also facilitated, as body and partition framing can be prepared by machine for the fitting of panelling which can be polished before erection; the mouldings can also be finish polished ready for fitting into position.

A liquid plastic which has recently been developed represents what is claimed to be a new advance in interior decoration. This plastic, when sprayed on to a timber surface and dried under radiant heat lamps, hardens and leaves a fire resistant, resilient plastic coating. The coating can be either transparent or pigmented. The transparent coating is used where the panelling is decoratively veneered, the pigmented where plain colours are required.

This new panelling, known as SaR-ReZ, a product of Saro Laminated Wood Products Limited, Folly Works, Whippingham, I.O.W., can be produced with almost any decorative colour or veneer in any thickness of size of plywood, blockboard, or Saroblock (a kerfed board alternative to block

board). The plastic surface is an integral part of the wood, does not blister, and can easily be touched up. The application of infra-red heating is, it is stated, an essential feature of the fire-resistant wood finish, and all panels after spraying with a solution of synthetic resins on to a specially prepared Saro plywood or blockboard pass through, on a conveyor belt, a battery of radiant heat lamps.

The solvents evaporate, leaving a fully polymerised, hard, but plastic surface. The surface is then cut down and polished to the degree desired. The use of the infra-red for stoving is the result of experimental work carried out in the research laboratories of the General Electric Co. Ltd. The plant has been designed to deal with panels up to 8 ft. in length and 5 ft. wide.

The infra-red reflector lamps are mounted horizontally and suitably spaced; side and end reflectors complete an unbroken surface which prevents loss of radiation. A variation in heat intensity can be effected to stove finishes of different compositions with variations in moisture content and other characteristics; conveyor speed can be varied.

Conditioning

Veneers are first calibrated within a tolerance of .0005 in. and conditioning of the veneer is carried out in a mechanical dryer. The edges are trimmed, trued, and edge-jointed; the decorative veneer is now prepared.

The veneers are passed through glue-spreading machines, after which the assembled plys are passed through multi-platen hot presses of varying size; the presses are steam heated and hydraulically operated. Automatic control ensures correct temperature, pressure, and pressing time. Panels are then sanded and finished to the degree of polish required. The raw materials used in the make-up of the SaR-ReZ finish are supplied by British Resin Products Limited, 21, St. James's Square, S.W.1.



London Transport "R" stock fitted with the new plastic panels

Locomotives for Argentine Railways

Three-cylinder engines equipped with British-Caprotti valve gear will operate express passenger services on the General Mitre Railway

AMONG the orders recently completed by the Vulcan Foundry Limited, Newton-le-Willows, are twenty 4-6-2 "PS11" class passenger locomotives for the Argentine Railways. The locomotives are a modernised version of 20 "PS11" class engines built for the former Central Argentine Railway by Sir W. G. Armstrong Whitworth & Co. (Engineers) Ltd., Scotswood Works, Newcastle-on-Tyne, which were described and illustrated in the January, 1931, issue of *The Railway Engineer*.

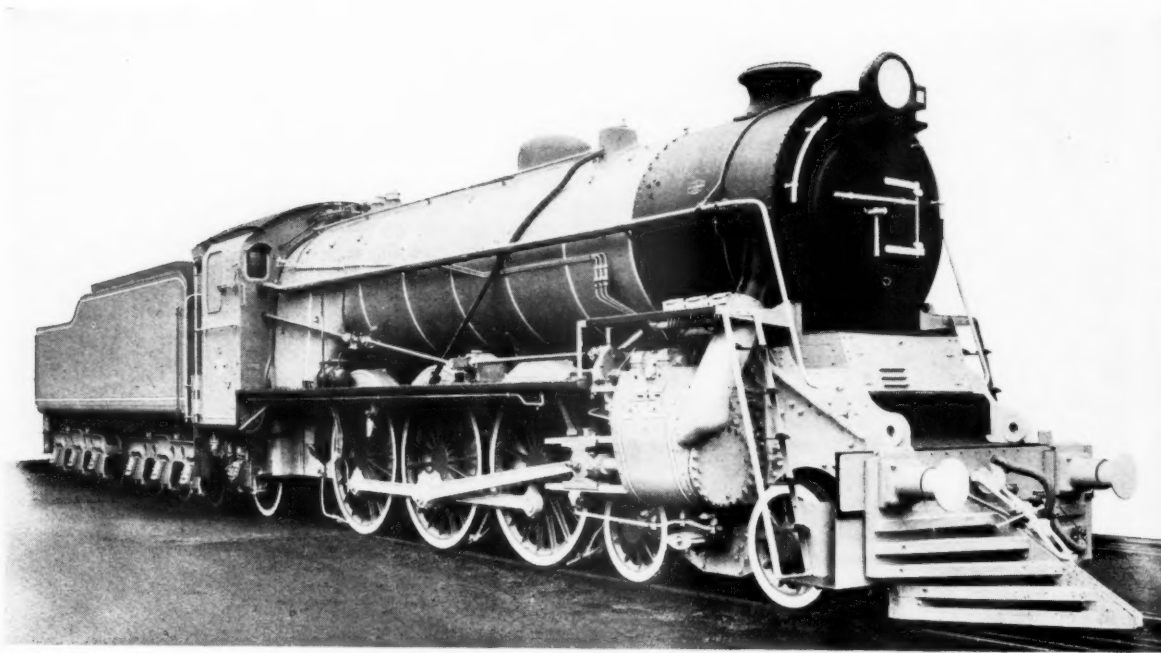
The engines are of the three-cylinder simple type, oil fired, and equipped with British-Caprotti valve gear, and with double six-wheel bogie tenders. They are designed to negotiate a minimum

curve of 120 metres (394 ft.) and the maximum axle load is 18 tons. The firebox is of the round-top type, with inner firebox of steel; the throat and back plate are welded to, and the tube plate riveted to, the wrapper. The slide-valve type regulator in the dome is fitted with a steam port for operating the British-Caprotti valves and the main internal steam pipe is of steel.

The boiler mountings consist of two 4-in. dia. Ross pop safety valves, two blow-down valves on the throat plate, discharging through vertical mufflers and operated by gearing from the cab. A Davies & Metcalfe No. 11 live steam injector and a Davies & Metcalfe H.J. type exhaust steam injector on the left-

hand side of the engine supply water to the boiler through top-feed clackboxes on the first ring of the boiler. A Clyde sand gun for tube cleaning, two water gauges with prismatic indicator glasses, and a Detroit No. 22A three-pint three-feed S.F. lubricator are mounted on the back of the firebox.

Other fittings include a blower valve on the left-hand side of the smokebox operated by handwheel in the cab; all control valves are mounted on a steam stand with handwheels convenient for operation inside the cab. A Teloc R.T. 835 speed indicator is also supplied. The boiler, firebox, and cylinders are lagged with lightweight Limpet asbestos mattresses, with extra lagging on the



"PS11" class locomotive for passenger service on the Argentine Railways

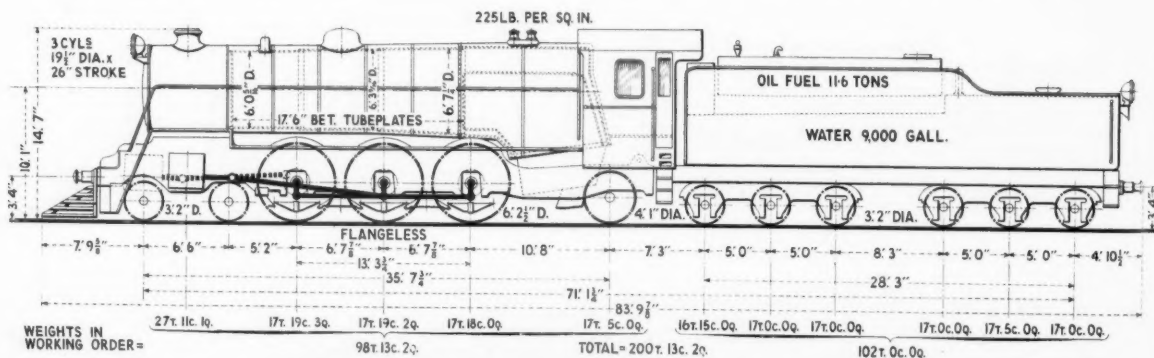


Diagram of principal weights and dimensions of the locomotive

firebox backplate, ensuring that the cab is kept as cool as possible.

The frame is of steel plates $1\frac{1}{2}$ in. thick, the hind drag casting being built to take heavy buffing shocks, the leading end of the frame being also well stiffened with welded-steel gussets. Adequate frame stretchers are provided and these are secured to the frame-plates by cold-turned rivets. The leading bogie is provided with spring side control, and the hind truck is of the radial axlebox type, with manganese-steel liners fitted to axleboxes and guides.

The cab is enclosed with air space in roof, front, and side windows, and side entrance doors and a front door opening on to the platform on the left-hand side. Upholstered seats are provided on each side of the cab, with padded arm rests along the side of the cab window openings. The coupled wheels have been carefully balanced to ensure steadiness when running, the balance weights being cast solid with the wheel centres, and 33 per cent. of the reciprocating weight is balanced. The crank axle is of the built-up type. The coupled axleboxes are of cast steel with bronze bearings lined with Eyre anti-friction metal and arranged for oil lubrication. Compensation is provided between all the coupled springs which are underslung.

The cylinder castings are of steel, provided with nickel-alloy iron liners in the barrels. The hind cylinder covers are cast integral with the cylinders and the front cylinder covers are also of steel castings. The pistons are of cast steel with a brass rim cast in position and three hard centrifugally cast-iron piston rings in each piston.

The Alligator type crossheads are steel castings provided with cast-iron slippers lined with Eyre anti-friction metal and with gudgeon pins arranged for hard grease lubrication. The British-Caprotti valve gear is of the latest type with valves actuated by steam pressure. The

connecting and coupling rods are of Vibrac steel grade V.30 and the Ajax system of grease lubrication is provided.

A steam brake is fitted for both engine and tender and vacuum equipment is provided for the train brake. The steam brake valve and vacuum brake ejector are arranged to be operated separately. All pins in the brake gear are case-hardened and pin holes are fitted with Walter patent hardened-steel split bushes. Sanding is provided to the leading and intermediate wheels for forward running, and to the trailing wheels for backward running, operation being effected by a Gresham & Craven steam sanding apparatus operated from the right-hand side of the cab. The low pressure system of steam heating with Hopkinson R type reducing valve is provided.

Tender and Bogie Design

The tender water tank is of welded construction, and the oil fuel tank, also welded, is supported on top of the water tank, on longitudinal members only, so as to minimise the accumulation of oil and dust. The oil heater coils are in a compartment at the front of the tank so as to concentrate the heat at the fuel outlet. A 6-in. type R. & G. Bayham fluid measure and a $2\frac{1}{2}$ -in. dia. Rototherm temperature gauge are provided. The tender frame is constructed of steel channels, well braced with cast-steel cross stretchers and a cast-steel dragbox at the front end.

The six-wheel bogies are of the swing bolster type, of cast-steel Commonwealth design, providing accessibility to all parts likely to require renewal or adjustment under service conditions. All parts subject to wear are protected by renewable manganese-steel liners. The bolsters are also steel castings of Commonwealth design. All hole, for swing link pins are fitted with Walter patent hardened steel split bushes; the

brake gear is also similarly fitted. The tender wheels are of the solid rolled disc type.

Laminated springs are provided, compensation being arranged within each bogie. The brake is of the clasp type arranged to work on all wheels, and the brake blocks and carriers are of the Sterlingworth type, operated by both steam and hand through a screw gear.

Tonum "E" headlights and tail lights provided by J. Stone & Co. Ltd. are carried on the front of the smokebox and the back of the tender. Also supplied are cab roof, gauge and sight feed lubricator lamps and one fixed lamp between the engine frame to illuminate the centre crosshead, and one fixed lamp to illuminate the injector overflow. Power is supplied by a 24-V. 350/500-W. turbo-generator mounted on the platform on the right-hand side of the engine.

Principal Dimensions

The principal dimensions are:

Cylinders (3)	...	...	19½ in. dia. — 26 in. stroke.
Coupled wheels, dia.	...	...	6 ft. 2½ in.
Bogie wheels, dia.	...	...	3 ft. 2 in.
Trailing truck wheels, dia.	...	...	4 ft. 1 in.
Wheelbase, coupled	...	...	13 ft. 3½ in.
Wheelbase, total engine	...	...	35 ft. 7½ in.
Heating surface—			
Small tubes	...	...	1,195.8 sq. ft.
Large tubes	...	...	806.4 sq. ft.
Firebox	...	...	205.8 sq. ft.
Total evaporative	...	...	2,208.0 sq. ft.
Superheater	...	...	542.0 sq. ft.
Grate area	...	...	43.0 sq. ft.
Working pressure	...	...	225 lb. sq. in.
Adhesive weight	...	...	53.85 tons
Weight of engine and tender in working order	...	...	200.67 tons
Tractive effort at 85 per cent. working pressure	...	...	38,068 lb.
Tender water capacity	...	...	9,000 gal.
oil capacity	...	...	11.6 tons
Total wheelbase, engine and tender	...	...	71 ft. 1½ in.
Total length	...	...	83 ft. 9½ in.
Max. height (to top of chimney)	...	...	14 ft. 7 in.
Max. width (over cab handrails)	...	...	10 ft. 8½ in.

The Consulting Engineers were Messrs. Livesey & Henderson, who were also responsible for inspection during construction.

Modern German Station Architecture



Starnberger Station, Munich, adjoining the main station and served by local and medium-distance trains

Relay Interlocking at s'Hertogenbosch

In reconstructing signalling destroyed during the war, the Netherlands Railways have installed the "NX" system of relay interlocking

ON the night of Sunday, September 3-4, 1950, the Netherlands Railways brought into operation the new power signalling installation at s'Hertogenbosch Station, the first major "all-relay" interlocking to be installed in the country. The original equipment at s'Hertogenbosch was almost destroyed during hostilities, and as a completely new installation was necessary it was decided to adopt the "NX," or "entrance and exit," relay interlock-

by the General Railway Signal Company, Rochester, N.Y., U.S.A., which had provided the automatic semaphore type signalling installations on the Netherlands Railways in pre-war years, in association with the well-known Philips electrical undertaking and other Netherlands firms.

Operation of the System

It may be recalled that, with the "NX" system, an entire route is set up simply by operating an "entrance" and an "exit" button, fitted on the track diagram itself. The operation of any desired combination of such buttons will automatically set up and lock the route selected, including the operation of all relevant points and signals and the proving clear of the relevant track circuits. The condition of all points, signals, and track circuit sections is indicated on the diagram. If more than one route is possible for a desired movement the equipment automatically selects the most suitable route available

in accordance with a pre-arranged sequence. Provision is made for the independent operation of any pair of points in case of emergency.

The interlocking is exclusively based on circuits controlled by relays, which can be accommodated outside the signal box, thus permitting the greatest possible compactness of the actual operating panel, on which the points are indicated by small movable tongue pieces. The "entrance" buttons represent signals which, if operated in conjunction with an "exit" button, change to clear as soon as all the prescribed conditions are fulfilled. Any intermediate signals along the route thus selected are cleared automatically. If the setting up of a given route has to be cancelled, the entrance button is pulled out. To authorise a shunting movement into a road not necessarily free of vehicles the corresponding route button is turned instead of being pressed.

The approach of trains from adjacent



Three-unit home signal, for maximum, medium (45 m.p.h.) and low (28 m.p.h.) speed, with telephone and relay case

ing apparatus recently applied at Stratford, on the Eastern Region of British Railways, in connection with the re-signalling of the line between London and Gidea Park.

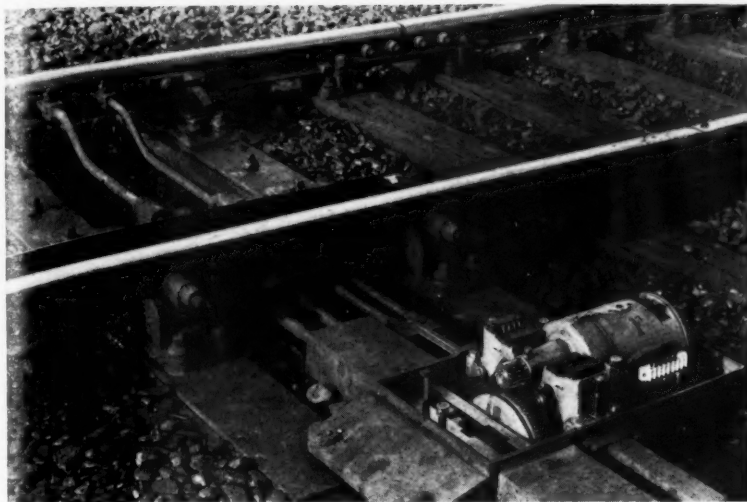
At the same time, the new system of speed signal aspects for interlocking areas, adopted by the Netherlands Railways on the advice of their Signal Engineer, Mr. J. H. Verstegen, has been applied, and this gives additional interest to an installation which has other features, such as trailable point machines, that are particularly associated with operating practice in the Netherlands and other parts of the Continent.

A description of this important installation has been given by Mr. Verstegen in our contemporary *De Ingenieur* for October 6, 1950, to whom we are also indebted for the accompanying illustrations.

The apparatus has been constructed



Three-aspect signal, for maximum speed on green light; telephone; and relay case



Electric trailable point machine, manufactured in Holland

stations is shown by a white indicating light located on the corresponding section on the track diagram accompanied by a bell signal; this lights up when the train reaches a point about 3,280 yd. in rear of the station, and remains showing until it has arrived. Those points held locked by the route selected are indicated on the panel by small red lights, which thus indicate the route itself. Any sections or points occupied by the train are indicated, in the usual way, by a white light in the corresponding section of the track diagram, and all become extinguished when the train has passed. Point control lights connected with the independent point switches above the track diagram show a white light, if the points are not locked normal or reverse.

The installation is operated by two signalmen (one man only during off-peak hours). The destroyed pre-war installation consisted of three signal boxes with five men, although then there were only 70 pairs of points instead of the 91 now provided.

All the signals within the controlled area are of the colour-light type. The

through roads are fitted with three-unit signals carried on posts; otherwise, one-unit or two-unit dwarf signals are used. Red indicates absolute stop and is always preceded by a yellow aspect at the signal in the rear. If the latter signal is located short of the breaking distance, an intermittent yellow aspect, flashing 75 times a minute is exhibited. If a shunting movement is authorised into an occupied line, another intermittent yellow signal is shown, flashing 180 times a minute. The same signal also is displayed if a shunting movement is authorised into a siding outside the "NX" controlled area.

Several of the signals consist of two or three units, which apply to different maximum speeds; with three units the topmost applies to overall maximum speed, the middle one to a "medium speed" (in this case 75 km.p.h., or 45 m.p.h.), and the lowest to speeds up to 45 km.p.h. (28 m.p.h.). The signal system is thus basically three-speed.

The changeover of the signalling installations was a major engineering task, as it included 91 points, 75 colour light signals and 80 track circuits. The ap-

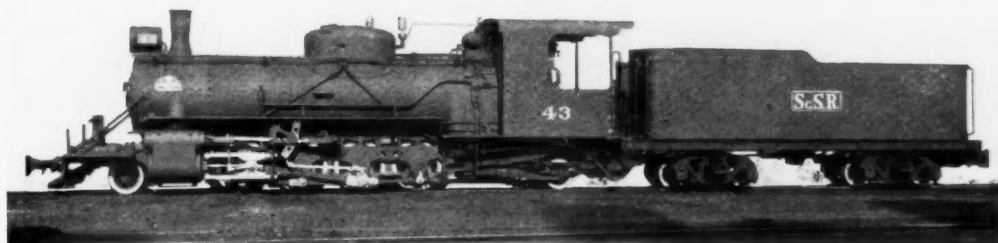


Two-unit signal at ground level, for medium (45 m.p.h.) and low (28 m.p.h.) speed, in station area

proximately 2,300 relays are grouped in two different relay rooms at different ends of the station, to economise on wiring. Telephones permit communication with the signalman from many points of the controlled area.

There are many interesting features in the new Netherlands system of signal aspects, which distinguish it from any other in use, and we hope to give more detailed reference to it in a later issue.

2-8-2 Locomotive for Scindia State Railways, India



Narrow-gauge "12 S 29" class 2-8-2 tender locomotive built by the Baldwin Locomotive Works, U.S.A., for freight service on the Scindia State Railways, India. The locomotive, which is one of a series of four, has 12 in. by 18 in. cylinders, a boiler with a working pressure of 200 lb. per sq. in. and 2 ft. 9 in. coupled wheels; it has a tractive force of 13,300 lb.

British Railways Standard Wagon Axlebox

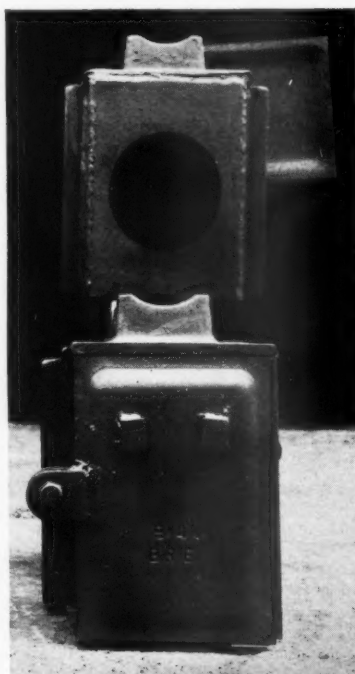
Preventing loss of oil when tipping the wagon

WITH a view to implementing their policy of standardisation British Railways have placed orders for the supply of standard wagon axleboxes with Sir W. G. Armstrong Whitworth & Co. (Ironfounders) Ltd., Gateshead. This type of axlebox, which is a development of the fabricated axlebox designed by the former L.M.S.R., is being manufactured in three sizes, and is suitable for 9 in. \times 4½ in., 9 in. \times 4½ in., and 10 in. \times 5 in. journals; the axleboxes are applicable to wagons from ten tons to 21 tons.

The axlebox is fabricated from mild-steel plate ½ in. and ¾ in. thick, with which is incorporated a drop-stamp forging welded to the axlebox for carrying the laminated spring. The axlebox guides are also welded to the axlebox, the whole being assembled in jigs and welded by means of automatic welding machines.

The principal feature of the design is the provision of an unspillable oil tray, which allows wagons to be unloaded by tippler or similar device without resulting loss of oil.

This tray is made of light-gauge mild-steel plate, oxy-acetylene welded. Oil is fed from the tray to the journal through the medium of a spring-loaded felt pad, the whole of which admits ease of replacement for re-oiling purposes.



British Railways standard wagon axlebox

The fabricated steel axlebox represents a saving in weight of approximately 27 lb. each, compared to the cast-iron axlebox, but, apart from this aspect, a considerable saving in consumption can be expected, because the cast-iron axlebox is liable to fracture during shunting operations.

STEEL INDUSTRY RESEARCH.—Agreement has been reached between the British Iron & Steel Research Association and the Research & Development Division of the British Steel Founders' Association whereby the latter becomes responsible for the co-operative research requirements of the steel foundry industry.

PAMPHLET ON ENGINEERING CONSTRUCTION WORK.—The Ministry of Labour & National Service has issued a pamphlet containing a revised preliminary draft of regulations under the Factories Acts, 1937 and 1948, as to safety, health, and welfare in connection with work of engineering construction. This is a revision of a first preliminary draft published in 1945. Numerous amendments suggested were also relevant to the draft of a parallel code in connection with building operations. The points raised in connection with the building code have been cleared up and regulations have been made. Amendments of the 1945 draft now contemplated are numerous. Copies can be obtained from H.M. Stationery Office, price 1s. 6d.



A completed batch of standard wagon axleboxes ready for despatch

INDUSTRIAL OUTPUT IN 1950.—An increase of 7 per cent. in industrial production in 1950 over 1949 is shown in the *London & Cambridge Economic Service Index* for December; the increase is about the same as for 1949 over 1948. With 1946 as the base

year (100) the index for the total quantity of goods delivered was 137 in 1950. The industrial machinery and equipment group average in 1950 was 171, against 123, 151 and 161 for 1947, 1948, and 1949 respectively; the corresponding figures for the

shipbuilding group (the only one to show a decline) were 98 for 1950, and 99, 103, and 102 for the three preceding years. For December, 1950, when the raw materials shortage began to be felt, total production was 4 per cent. over December, 1949.

RAILWAY NEWS SECTION

PERSONAL

Mr. S. C. H. Fossett, Carriage & Wagon Works Manager, Stratford, Eastern Region, has been appointed Carriage & Wagon Works Manager, York, North Eastern Region.

Brigadier James Storar, C.B.E., M.I.Mech.E., has been appointed Chairman of Robert Stephenson & Hawthorns

Royal Electrical & Mechanical Engineers, with the rank of Brigadier; he was awarded the C.B.E. in 1945. Since his release from the Army in 1946 he has paid business visits to France, Egypt, South Africa, Rhodesia, Nyasaland, Brazil, Peru, Chile, Bolivia, Venezuela, Colombia, Argentina, the U.S.A., and Canada.

The following notification appeared recently in *The London Gazette* under the

Electric Co., Ltd., left London on February 24, by air, *en route* to Ceylon, Australia, and Malaya. He is returning to Great Britain on April 29.

Sir Herbert Merrett, J.P., who, as recorded in our December 22, 1950, issue, has been appointed a part-time Member of the Railway Executive, was born in 1886 and educated at Cardiff. He is Chairman of Powell Duffryn Limited and Cory



Brigadier James Storar
Appointed Chairman of Robert Stephenson & Hawthorns Limited



Sir Herbert Merrett
Appointed a part-time Member of the Railway Executive

Elliott

I & Fry

Limited. He is also Chairman of Vulcan Foundry Limited and a Director of a number of railways in South America and Africa. He received his early training in locomotive engineering with Robert Stephensons at Darlington. During the 1914-1918 war he served as a company commander in the Northumberland Fusiliers and later in the Railway Operating Division of the Royal Engineers he was mentioned in dispatches. In 1919 he was appointed as a District Locomotive Superintendent on the Rhodesia Railways and in 1923 left to become Chief Mechanical Engineer of the Shire Highlands, Central Africa, and Trans-Zambesia railway companies, where he was in charge of the rolling stock and steamer service. During the absence of the General Manager he acted in his stead. He rejoined the Army in the recent war as a Lt.-Colonel and was promoted Colonel in 1941. In 1942 he was posted to the War Office as an Assistant Director of Mechanical Engineering and in 1943 was appointed a Deputy Director,

heading of Regular Army Reserve of Officers, Royal Engineers: Lieutenant R. M. Robbins, from Emergency Commission, to be Captain, January, 1951, and is granted the honorary rank of Major.

Before Sir Eustace Missenden retired as Chairman of the Railway Executive on January 31, Officers and Staff who had been attached directly to him at 222, Marylebone Road, gathered in the Chairman's Room to express their good wishes. Opportunity was taken to present him with a case of pipes and an ashtray as a souvenir of his association with them.

British Railways, Eastern Region, has announced that Mr. E. O. Lloyd, Assistant District Goods Superintendent (London Suburban), has been appointed District Goods Superintendent (London Suburban), Gordon Hill.

Mr. Leslie Gamage, Vice-Chairman and Joint Managing Director of the General

Brothers & Co. Ltd., and is a Director of the National Provincial Bank Limited and of the Vacuum Oil Co. Ltd. In 1934-35 he was High Sheriff of Glamorgan, and was President of the Cardiff Chamber of Commerce in 1936. Sir Herbert Merrett was President of the British Coal Exporters' Federation in 1947-48. Among other positions he holds are President of the Glamorgan County Cricket Club and the Cardiff City Association Football Club. He is Justice of Peace for the County of Glamorgan. In the King's Birthday List, 1950, he received the honour of Knighthood for public services in South Wales.

Mr. Kenneth Cantlie, Overseas Representative of the Locomotive Manufacturers' Association of Great Britain, left Southampton in the *Queen Elizabeth* on February 23. Mr. Cantlie, who had recently returned to this country from Africa, will stay in New York for a few days, and is then proceeding on a visit to the Central American states.



Mr. C. T. Pelly

Divisional Marine Manager, Portsmouth Harbour, Southern Region, who has retired



Mr. E. P. W. Robins

Appointed Divisional Marine Manager, Portsmouth, Southern Region



Mr. P. H. Hicks

Appointed District Engineer, East African Railways & Harbours

Mr. C. T. Pelly, Divisional Marine Manager, Portsmouth Harbour, Southern Region, who, as recorded in our February 16 issue, has retired, served with the Gurkha Rifles, Indian Army, in the 1914-18 war and was demobilised in 1919. He joined the L.S.W.R. as a cadet in 1920 and after obtaining a general knowledge of dock supervision, was appointed Outdoor General Assistant, Docks & Marine Department, Southampton, Southern Railway, in 1924. Mr. Pelly became Divisional Marine Manager, Portsmouth Harbour, in 1938.

Mr. E. P. W. Robins, General Assistant, Portsmouth, Marine Department, Southern Region, who, as recorded in our February 16 issue, has been appointed Divisional Marine Manager, Portsmouth, joined the Southern Railway in 1929. After training in various departments he went to the Traffic Manager's Office, where he assisted

in the organisation of railway air services, and subsequently became the Traffic Manager's representative for new works. Mr. Robins was appointed General Assistant at Southampton Docks in 1937 and in 1939 went to the United States as a representative at the New York World Fair. In December, 1939, he went to Newhaven as Assistant. The following year he joined the R.A.F. and served in Egypt, the Western Desert, and India, where he was Chief Traffic Officer to Transport Command, with the rank of Wing Commander. Following his return to the Southern Railway, he was appointed General Assistant, Portsmouth, in 1947.

Mr. P. H. Hicks, B.Sc.(Eng.), A.C.G.I., A.M.I.C.E., who, as recorded in our January 5 issue, has been appointed District Engineer, East African Railways & Harbours, was educated at St. Paul's School and the City & Guilds Engineering

College, London. In 1937 he joined the Kenya & Uganda Railways & Harbours as a cadet engineer and was appointed Assistant Engineer in January, 1940. From 1940 to 1943 Mr. Hicks was seconded for military service. He has recently been nominated as Resident Engineer in charge of the West Uganda Extension survey, in connection with the line which is projected from Kampala to the Kilembe Mines in West Uganda.

Mr. E. Stanley, Works Superintendent, Earles'own Works, London Midland Region, who, as recorded in our February 23 issue, has been appointed Assistant Carriage & Wagon Engineer, Derby headquarters, served his apprenticeship at the locomotive, carriage, and wagon works of the North Staffordshire Railway and received his technical training at the Stoke-on-Trent Technical Institutes. After passing through the various workshops he entered the carriage



Mr. E. Stanley

Appointed Assistant Carriage & Wagon Engineer, Derby headquarters, London Midland Region



Mr. P. Gray

Appointed Works Manager, Carriage & Wagon Department, Gorton, Eastern Region



Mr. S. Bollon

Appointed Assistant Publicity Officer, Railway Executive

& wagon drawing office and later was transferred to the locomotive drawing office; in 1923, he returned to the Carriage & Wagon Department, assisting the Works Manager at Stoke Works. In 1925 he was transferred to the L.M.S.R. chief carriage & wagon drawing office at Derby. From 1929-31 he was a member of the Wagon Betterment Committee, afterwards serving for six months on the main Manufacturing Cost Committee, before becoming, in 1932, Progress Assistant to the Works Superintendent, Carriage & Wagon Department, Derby. From 1937-42 Mr. Stanley was Assistant Chief Carriage & Wagon Draughtsman, Derby, and then he was appointed Assistant to the Chief Outdoor Assistant for Carriages & Wagons. In 1944 he was appointed Assistant Works Superintendent, Wolverton, and he has been Works Superintendent, Earlestown Works since 1948.

Mr. P. Gray, A.M.I.Loco.E., Assistant to Locomotive Works Manager, Gorton (Manchester), who has been appointed Works Manager, Carriage & Wagon Department, Gorton, Eastern Region, was educated at Glasgow Royal Technical College. He joined the L.N.E.R. at Cowlairs Locomotive Works, Glasgow, in 1931, and on completion of his apprenticeship was employed in the drawing office. In 1938 he was appointed New Works Inspector, Carriage & Wagon Department, and the following year was transferred to St. Margarets, Edinburgh, as Chief Carriage & Wagon Inspector. Mr. Gray was appointed Assistant to the Works Manager in the same department at Cowlairs in 1943, and took up a similar position at Gorton in 1944; he became Locomotive Works Manager, Gorton (Manchester), in 1947.

Mr. S. Bollon, Publicity Assistant, Public Relations & Publicity Officer's Department, Eastern Region, who, as recorded in our February 2 issue, has been appointed Assistant Publicity Officer, Railway Executive headquarters, was educated at the Stationers' Company School, and, after serving in the infantry and R.A.F., joined the Great Northern Railway at Kings Cross Goods in 1920. He was subsequently transferred to the Chief Goods Manager's Statistical Office and later to the Canvassing Office, L.N.E.R.; in 1927, he joined the Advertising Department. He became Junior Canvasser, Commercial Advertising Department, in 1931, District Commercial Advertising Agent, Glasgow, in 1932, and was appointed to a similar position in London in 1937. Mr. Bollon was appointed Advertising Representative, L.N.E.R. (Southern Area), in 1946 and Publicity Assistant to the Public Relations & Publicity Officer, British Railways, Eastern Region, in 1949.

G.W.R. TRAINEES REUNION DINNER

The twentieth ex-G.W.R. special trainees annual reunion and dinner was held at the New Norfolk Hotel, Paddington, on February 16. The arrangements, in accordance with past practice, were made by the 1921 group of trainees, and the function, which was attended by 40 members, was under the chairmanship of Mr. S. G. Hearn, Assistant Operating Superintendent, Western Region. Mr. L. E. Ford, General Manager, Port of London Authority, proposed the toast "British Railways," and Mr. T. H. Turner, Mechanical & Electrical Engineer's Department, Swindon, responded. Mr. E. Havers, Assistant to the Commercial Superintendent (Mineral), Paddington Station, proposed the toast "Colleagues Overseas."

Great Northern Railway Company (Ireland)

*Offer by Dublin and Belfast Governments
for acquisition rejected by stockholders*

The annual meeting of the Great Northern Railway Company (Ireland) was held in Dublin on February 23. Lord Glenavy, Chairman, said that in view of other important items on the agenda he proposed to deal more briefly than usual with the accounts. On the railway, gross receipts fell by £142,620, mainly because of an increase in the number of private motor vehicles on the roads, the poor summer weather, and of less money available for travelling. Expenditure was reduced by £126,147, but that considerable economy, which had to be sought, was only secured by reductions in staff and by withholding orders for supplies and materials without which the system cannot carry on. The net result was a loss of £16,473 more than in the previous year.

The road services earned a surplus of £74,028, £17,220 less than last year. Expenditure rose, and receipts were diminished by the unfavourable summer. The increased loss on the railway, and the diminished surplus on the roads, account for most of the loss of £37,412 in the year.

The total net income amounted to a loss on working of £105,879 which, after the addition of fixed charges became £127,976. This resulted from a surplus of net income in the South of £123,096 being offset by a loss in the North of £251,072. For that loss the failure to implement the Road & Rail Transport Act, 1935, in the North was the only established cause. After the payment of debenture interest there was a deficit of £220,971, £36,479 greater than in the previous year. A transfer of £100,714 from the reserve for war damage contributions no longer required, was possible in 1949 in reduction of the deficit, but no such transfer could be made in 1950, which accordingly ended with an increase in the deficit of £137,193.

The report and accounts were adopted.

Most of the stockholders, said Lord Glenavy, would have seen the publication in the Press giving the results of the census of stockholders' opinions on the valuations adopted by the Governments for their offer, which was taken by request of the Stockholders' Protection Association. A summary of the results was: for acceptance of the offer—holders of £497,152, or 5.4 per cent.; for rejection of the offer—holders of £6,727,705, or 72.8 per cent.; outstanding—holders of £2,019,163, or 21.8 per cent.

The census was affected by the bank strike, as some stockholders, especially trustees, with securities held in the name of a bank, had not had sufficient time to complete and return the form. There were also the normal changes of address, absence from home, illness, and so on.

In a letter to the Stockholders' Association on January 12 to convey to it the offer as received in writing from the Governments, the Association was informed that when representatives of the Board were summoned on January 9 to hear a verbal statement of the Government's proposition they were told that if the offer was not accepted some other proposition would be adopted which would not be more favourable to the stockholders. No such qualification appeared in the written statements of the Governments dated January 11, in which the proposition was described expressly as an "offer." No doubt the Governments had realised in the meantime that a proposition to the stockholders involving, if they did not accept it,

something no better and possibly worse for them would not be an offer but an ultimatum, and that in the régimes under which we live Governments require express parliamentary authority for issuing an ultimatum to any body of citizens.

Plea for Arbitration

The first resolution put to the meeting was:—

"The debenture and stockholders reject the offer of the Governments on the ground that it is indefensible. This meeting demands that, if the Governments consider they have any case for paying off debenture and stockholders at less than the break-up value (£10,876,498) of the property which the Governments want to acquire, the case be referred to arbitration, and reminds the Governments that arbitration cannot in democratic justice be denied to those whose average holding of stock is £886, when it was allowed to the powerful London Midland & Scottish Company in the case of the Northern Counties Committee."

The resolution, put by Mr. Fred Storey, Chairman of the Shareholders' Protection Association, was carried unanimously.

Lord Glenavy, commenting on the resolution, said it seemed to him that it was asking for the break-up value of the property, and if the Governments would not concede that, then the matter should go to arbitration. The point about asking for arbitration was that it was extremely difficult to see on what grounds the Governments could, in justice, refuse it.

The second resolution, also proposed by Mr. Storey, read:—

"No effective action having yet been taken by the Governments enable them to implement their undertakings as to liabilities incurred by the company, and their offer for acquisition having been rejected, this meeting authorises and requests the directors to press the application for a discontinuance of services in Northern Ireland."

Before the resolution was put to the meeting, Lord Glenavy reviewed aspects of recent negotiations between the company and the two Governments. An assurance was given, he said, that if the company maintained the existing services "insofar as the resources of the company may prove insufficient to meet the liabilities they would be met out of public funds."

The company had written to the two Governments pointing out that the assurance could not be put into effect until Parliamentary authority had been obtained, and, in fact, the Governments had reminded the company that until Parliament had voted monies to cover liabilities they could not give effect to the undertaking.

Lord Glenavy said that there had been requests before the Board for some time from heads of departments for the purchase of stores and materials amounting to some £150,000, and other requests in connection with work on rolling stock and vehicles amounting to £40,000.

"We have not the resources to meet that liability," Lord Glenavy said, "and, having regard to our previous experience at the hands of Government departments, we are extremely reluctant to incur that liability until we first have from the Governments an assurance to meet it."

The resolution was carried unanimously.

Staff & Labour Matters**Railway Wages and Salaries Dispute***Agreement between the Executive and the railway trades unions*

Agreement was reached on February 23, though negotiations between the Railway Executive and the three railway unions broke down on Wednesday, February 21, after three days of discussions, as a result of which the following statement was issued by the Railway Executive that night.

"The Railway Executive regrets to announce that, despite every effort to find a solution, it has not been possible to reach agreement with the three railway trade unions on the applications for increased salaries and wages which have been under discussion since Monday last.

"It will be recalled that in its report the recent court of inquiry set up by the Minister of Labour at the request of the trade unions stated that the Executive original offer, amounting to about £6½ million a year, 'represents a genuine and constructive attempt to improve the relative position of railway workers' and the court's own recommendations, which advanced the railway offer to £7 million a year, 'represents the maximum amount which it is within the capacity of British Railways to pay, without imposing intolerable burdens on them.'

"It was nevertheless with the object of endeavouring to see what further could be done to meet the case made by the unions that the railwaymen's wages and salaries would still be too low in relation to hours of work and responsibility, and in the belief that this was an opportunity to reach a firm settlement, that the Executive entered into the latest negotiations. To this end, they offered to increase the recommendations of the court of inquiry by a further £2¼ million a year, making £9¼ million in all.

"The main features of the Executive proposal were as follows:—

"Lower-paid staff had already received an increase of 3s. 6d. a week from September, 1950, under the award of the Railway

Staff National Tribunal. There were consequential adjustments in rates up to and including 99s. a week (provinces) and comparable adjustments for clerical staff.

"Under the Railway Executive latest offer, which the trade unions have now rejected, the minimum-rated grades would receive a further increase of 4s. a week, making the minimum rate 100s. a week in the provinces and 103s. in London. The total increase accorded to minimum-rated staff from September, 1950, would thus have been 7s. 6d. a week. For the majority of salaried staff the latest offer provided for a further increase of £5 a year on top of that recommended by the court of inquiry.

"Examples of the various proposed increases are as follows:—

Grade	Present rate (per week)	Proposed by Court of Inquiry (per week)	Latest offer by Railway Executive (per week)
Shunter (Class 3) ...	103s. 6d.	110s.	112s.
Signalman (Class 5) ...	102s.	110s.	112s.
Signalman (Class 3) ...	110s.	115s.	116s. 6d.
(N.B.—R.E. proposal would transfer Class 5 Signalman to Class 4)			
Guard (5th year) ...	113s. 6d.	118s.	119s.
Engine cleaner—(lower rate) ...	96s.	97s. 6d.	100s.
(top rate) ...	103s.	107s.	109s.
Driver & motorman—(1st year) ...	124s.	130s.	131s.
Lengthman & relayman (3rd year) ...	97s. 6d.	102s.	104s. 6d.
Clerk (Class 5) (maximum) ...	£320 p.a.	£335 p.a.	£340 p.a.
Supervisor (Class 3) (maximum) ...	£390 p.a.	£410 p.a.	£415 p.a.
(N.B.—Supervisors include yard and station inspectors, and so on)			

Working Conditions

"As regards certain proposals for greater economy and efficiency which had been allied by the Railway Executive to its previous offer on wages and salaries, and which had also been referred to in the

report of the court of inquiry, the Railway Executive proposals were re-stated as follows, subject, in the case of lodging turns, to provision being made for special joint consultation with the trade unions:—

"Vanguards in the London area, who are due to be withdrawn by existing agreement between the Railway Executive and the N.U.R., to be withdrawn as from April 2, 1951.

"Calling-up of trainmen for rostered turns of duty to cease as from April 2. Men whose rostered turns of duty are changed after they have been booked off duty to be advised of change. All restrictions as to place of residence to be removed.

"Unproductive time. In order to avoid unproductive time and wasteful use of manpower, overtime to be worked within reasonable limits where necessary to complete a turn of duty. Full effect to be given to provision in National Agreement for rostering men up to 9 hr. Where changes in rosters are contemplated, local departmental committees to be given fullest opportunity, under the consultation procedure, to discuss all such changes.

"The Executive offered to extend the five-day week principle wherever it would be practicable without an adverse effect on the service.

"Extension of lodging turns. Lodging turns of duty for Trainmen to be extended where economy will accrue, subject to:—

(i) A Special Joint Committee, composed of representatives of the Railway Executive and of the headquarters of the unions concerned, to be set up to examine proposals for extension of lodging turns. The principles on which this special joint committee would work would be those of the consultative procedure. Every effort to be made, in the interests of more efficient and economical railway service to the public, to secure the greatest measure of agreement in respect of all proposals for extending lodging turns.

(ii) Any redundancy arising from the introduction of lodging turns not to be declared until three months have elapsed from the date of introduction of the lodging turn or turns in order to enable the redundancy to be absorbed, if possible, at the depot in question. Thereafter, to be dealt with under the agreed redundancy arrangements whereby the man would retain his original rate of pay for a period of 12 months after reduction, subject to the provisions of the agreement.

The Railway Executive were prepared to undertake that no man's services would be dispensed with as a direct result of the extension of lodging turns of duty, without the offer of alternative employment.

(iii) The Railway Executive were further prepared not to introduce any lodging turn without a booked return working, or without men being rostered to do so, or to any place less than 50 miles from men's home depots. Men would not be expected to lodge at any place at which there was no hostel or hotel accommodation. Payment was offered at the ordinary hourly rate for all time in excess of 12 hr., and it was proposed to increase from 6s. to 9s. the



Signing the wages agreement: (left to right) Mr. J. B. Figgins, Mr. John Elliot, and Mr. J. G. Baty

minimum allowance to men lodging away from home on "double home" turns. The Executive also undertook to try and space out lodging turns as widely as possible among the men concerned."

Meetings with Ministers

During that day (Wednesday), union leaders had contacted the Minister of Labour, and a meeting was arranged between the Minister of Labour and the union leaders for Thursday morning, February 22. Thursday was a day of much tension and ceaseless activity amongst leaders of both sides, and also the Ministry of Labour. Threats of a national rail stoppage made the crisis imminent and there was widespread disorganisation of traffic through unofficial strikes and go-slow tactics at many depots throughout the country. The following is a diary for Thursday, which proved to be a vital day:—

10 a.m. Meeting between the Minister of Labour (Mr. Aneurin Bevan) and union leaders.

2 p.m. Meeting between the Minister of Labour and Chairman (Mr. John Elliot) and Member for Labour Matters (Mr. W. P. Allen), Railway Executive.

2.30 p.m. Meeting between the Minister of Labour and union leaders.

5.30 p.m. Meeting between the Minister of Labour and union leaders, after which discussions continued with Sir Robert Gould, Chief Industrial Commissioner.

7.40 p.m. The Minister of Labour resumed discussions with unions and these went on at intervals up to 10 p.m.

Meanwhile Mr. Elliot and Mr. Allen went to the House of Commons to see the Minister of Transport (Mr. Alfred Barnes).

10.20 p.m. The Minister of Labour had discussions with the Chairman (Lord Hurcomb), the Deputy Chairman (Mr. J. Benstead), British Transport Commission, and Mr. Elliot and Mr. Allen.

10.50 p.m. A statement was issued by the Ministry of Labour: "Following upon the meetings with the Minister of Labour, and with a full realisation of the national interest in present circumstances, the Railway Executive and the unions have agreed to resume negotiations in an endeavour to reach a final and lasting settlement, and a meeting will be held early to-morrow morning."

Agreement Reached

After all-day discussions between the Railway Executive and the Trade Unions on Friday, February 23, agreement was finally reached in the evening. An announcement was made shortly after 6 p.m. that a settlement had been reached on all points in dispute with the three unions. The settlement is retrospective to January 1, 1951.

Salaried staff receive increases ranging from £25 a year at the maximum of Class V to £50 a year at the maximum of Special Class, Category "C." For female clerical staff the increases are from 7s. 6d. at the maximum of Class W.2, to 12s. a week at the maximum of Category "C," Special.

Examples (provincial rates) so far as wages staff are concerned are:—

Grade	Present rate	New rate	Increase
Shunter (class 3) ...	103s. 6d.	112s.	8s. 6d.
Yard foreman (Class 1) ...	123s. 6d.	132s.	8s. 6d.
Guards (5th year) ...	113s. 6d.	122s.	8s. 6d.
Signaller (Class 1) ...	120s.	129s.	9s.
" Special A ...	127s.	137s. 6d.	10s. 6d.
" B ...	132s.	142s. 6d.	12s. 6d.
Goods porter ...	96s.	102s. 6d.	6s. 6d.
Fireman (6th year) ...	117s.	126s.	9s.
Driver (6th year) ...	138s.	149s. 6d.	11s. 6d.
Lengthman and relayman (3rd year) ...	97s. 6d.	106s.	8s. 6d.

The above rates are provincial rates and London rates are 3s. more.

On the question of conditions, to which the unions have taken so much exception throughout the negotiations the unions agreed to sign a separate agreement with the Railway Executive which is given below.

"The union representatives acknowledge the imperative need of the fullest co-operation with the Railway Executive in the elimination of waste of manpower, in increasing efficiency and improving productivity within the railway industry.

They undertake to examine forthwith in that spirit any proposals which the Executive put forward and agree that action towards this end shall be taken without delay. A special Joint Committee of the Executive and the unions will therefore be set up immediately for this purpose.

Further, a joint manifesto signed by the Executive and the three unions will be

issued to the staff throughout British Railways informing them of the settlement and asking for their fullest support in the great tasks which lie ahead.

Signed on behalf of:—

Railway Executive
JOHN ELLIOT
Chairman
W. P. ALLEN
Member
National Union of Railwaymen
H. W. FRANKLIN
President
J. B. FIGGINS
General Secretary
Associated Society of Locomotive Engineers and Firemen
F. KELLAND
President
J. G. BATY
General Secretary
Railway Clerks' Association
PERCY MORRIS
President
G. B. THORNECROFT
General Secretary

Railway Clearing House,
February 23, 1951."

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Signed on behalf of:—

The Railway Executive.

Chairman.

John Elliot

Member.

W.P. Allen

The National Union of Railwaymen.

President.

H.W. Franklin

General Secretary.

The Associated Society of Locomotive Engineers and Firemen.

President.

F. Kelland

General Secretary.

The Railway Clerks' Association.

President.

Percy Morris

General Secretary.

Railway Clearing House,
23rd February, 1951.

Facsimile of agreement between the Railway Executive and the unions

Commenting on the agreement on wage rates, Mr. Elliot said that it would add to the railways' wages bill, on present scales of pay, some £11 million a year, or broadly $7\frac{1}{2}$ per cent. increase. This sum could not be found by the Railway Executive out of further economies or increased efficiency, which would necessitate authorisation of a further interim increase in railway rates, fares, and charges (under the Transport Act the B.T.C. must apply to the Transport Tribunal, which was a long proceeding; but the Minister might agree to grant an interim increase after consultation). The Railway Executive, continued Mr. Elliot, attached the greatest importance to the agreement with the unions on securing increased economy and efficiency and better use of manpower.

Regarding the wages of railway shopmen (who are not included in the 465,000 railwaymen covered by the agreement described above), Mr. Allen said that they could not leave out of consideration other grades of staff covered by other agreements, and on whose behalf there was an application under consideration; some of these grades of staff had a connection with outside industries to which regard must be paid.

Continuance of Unofficial Stoppages

Immediately the agreement was signed by the Railway Executive and the three trade unions, members of the A.S.L.E.F. and the N.U.R. were advised by their unions that settlement had been reached, and they were asked to honour the terms of the agreement by working normally. While this had the effect of stopping strike action or working to rule methods at some depots, there were certain places where the staff persisted in weekend token strikes which were due to start at midnight on Friday, February 23.

The main difficulties were experienced in the Western Region, where locomotive men at Old Oak Common, Southall, Oxford, Banbury, Tyseley, and Leamington failed to report for duty. Other depots on British Railways where token strikes were staged included Darnall Depot (Sheffield) and Saltley. As a result of this unconstitutional action on the part of the men there was serious dislocation of traffic, particularly on the Western Region.

The following official statement was issued by the Railway Executive on Saturday afternoon, February 24, in consequence:—

"The Railway Executive is appreciative of the fact that the vast majority of railwaymen through the country remained at their duty throughout this difficult week, and that most of those who took unofficial action responded at once to the unions' notice to return to normal work immediately, following settlement of the dispute yesterday.

"The Railway Executive regrets to state, however, that the staffs at certain motive power depots in some parts of the country have not yet resumed work. This is clearly not in accord with the spirit of the settlement with the unions. It has resulted already in hardship to the travelling public, and is also having a serious effect on the movement of the accumulation of freight traffic, particularly the working of empty wagons into the colliery districts, which is essential if coal output is to be maintained next week.

"The Railway Executive, therefore, gives notice that if this action is persisted in they will be compelled to ask the unions to meet them as quickly as possible to consider the situation which has arisen from this breach of the settlement arrived at last

night. All men booked for duty over the weekend should, therefore, in their own, their colleagues and the national interests report for duty at the appointed time."

On Monday, February 26, a meeting took place at Railway Executive headquarters between representatives of the Railway Executive and of the unions concerned in regard to the unofficial action taken during the weekend. The union representatives regretted that difficulties of this nature had occurred, but were confident that now the terms of settlement had become better known, the men concerned would recognise the importance of honouring the agreement.

Parliamentary Notes

Transport (Amendment) Bill

Lord Teynham, in the House of Lords on February 13, in moving the third reading of the Transport (Amendment) Bill, said the bill was an attempt, not to undo the Transport Act, but rather to make it more reasonable and workable. The main Government argument for rejection seemed to be that they had purchased for £70 million a monopoly of long-distance road haulage, and that if the 25-mile radius was extended, the greater part of that sum would be lost to the taxpayer. It was not true that the B.T.C. had bought a monopoly. It had bought a number of businesses on the basis of profits earned in highly competitive commercial conditions, and the greater part of the purchase price had been paid on account of tangible assets such as vehicles, premises, and plant.

As the bill proposed only to extend the radius of independent hauliers from 25 to 60 miles, and the B.T.C. itself had acquired a large interest in the short-distance haulage area, the proportion of the figure of £10 million which might represent a loss to the taxpayer was very small.

The Commission, he continued, had acquired a far greater interest in short-distance haulage than was anticipated in the original act. It had shown no willingness to leave short-distance traffic to the independent haulier and was attempting a monopoly in that field. The Road Haulage Executive and the Railway Executives were constantly opposing renewal of licences and had even issued to local officials a policy statement on the procedure for opposing such applications. This was contrary to the spirit of the Transport Act, 1947, and of the declarations made by Ministers.

Lord Teynham said in conclusion that the distance of 60 miles had been set down in this amending Bill largely to meet the position of hauliers in coastal areas, which were necessarily halved, and also to cover a reasonable day's short-distance work in carrying between two towns in almost any part of Britain.

Traffic with Scottish Ports

Lord Clydesmuir said there was much criticism of the working of the Transport Act in Scotland, largely because of inflexibility. In Scotland their economy depended much on their ports. Under the Act, anything brought by shippers to the docks from outside the 25-mile radius was within the purview of the B.T.C., except for specially excepted traffic. If the bill was accepted, that radius would be enlarged to 60 miles, which would provide considerable easement for shippers.

The Lord Privy Seal (Viscount Addison) said it was clear that the bill, if carried, would make it impossible for the B.T.C. to carry out its statutory duties.

He could understand the wish to repeal the Act, but not the wish to nullify the whole thing and pretend it made no difference.

On a division, the motion for the third reading was carried by 60 votes to 33.

A similar debate took place in the Commons on February 23 on the second reading of the Bill, which was carried by 242 votes to 234 (see editorial note).

Questions in Parliament

Railway Wages

Mr. Winston Churchill (Leader of the Opposition) on February 22 asked the Minister of Labour whether he had any statement to make on the railway situation. If it was inconvenient to make a statement at the present moment, they would gladly wait until the next morning.

Mr. Aneurin Bevan: I regret to state that the negotiations between the Railway Executive and the railway trade unions have not proved successful in reaching a settlement. I am gratified to find, however, that both sides are most appreciative of the amicable spirit that has animated these discussions. At the request of the trade unions, I had an interview with them this morning when they reported the position. I have also had a talk with the Railway Executive, but I am not yet in a position to report the result of these discussions.

Mr. J. B. Hynd (Attercliffe—Lab.): Can the Minister explain to the House why the railwaymen should be expected to bear the economic burden of running the railways any more than the employees of the air corporations are expected to carry the subsidies on those corporations?

Mr. Bevan: I think that my hon. friend, when he hears the ultimate outcome of the discussions, will find that we have not lost sight of that factor.

Fire in Birmingham-Glasgow Train

Mr. Barnett Janner (Leicester North West—Lab.) on February 19 asked the Minister of Transport what action he proposed to take on the recommendations made by Colonel Walker in a report on a fire in a Birmingham-Glasgow express when five people lost their lives.

Mr. Alfred Barnes in a written answer stated: The recommendations are in the first instance a matter for consideration by the Railway Executive. I have accordingly asked the Executive for its observations.

Redundant Railwaymen

Mr. A. A. H. Marlowe (Hove—C.) on February 20 asked the Minister of Labour how many railwaymen were made redundant by train cuts.

Mr. Frederick Lee (Parliamentary Secretary to the Ministry of Labour): I understand that no railwaymen have been rendered redundant.

Mr. Marlowe: If thousands of trains are taken off and the same number of men are kept in full employment, does not that show men are being kept on to do nothing?

Mr. Lee: So far the Railway Executive has found it possible to absorb traffic staff displaced as a result of cuts in the passenger train services by transferring them to other work to relieve a staff shortage.

Mr. Marlowe: But what are they doing? Mr. James Harrison (Nottingham East—Lab.): Is not the Minister aware that there is a considerable sick list on British Rail-

ways at the present time, and that it was fortunate that there was this surplus of men available?

Private Road Hauliers

Mr. George Odey (Beverley—C.) on February 12 asked the Minister of Transport, whether he would introduce legislation to transfer the issue of licences to private road hauliers from the B.T.C., an interested party, to an independent body.

Mr. Alfred Barnes in a written answer stated: Carriers' licences are issued by the independent licensing authorities appointed under the Road & Rail Traffic Act, 1933. If Mr. Odey has permits in mind, the Commission is authorised by the Transport Act to issue permits to carry long-distance traffic which otherwise under the act only it itself could carry. The exercise of this power is entirely discretionary and it would be incompatible with the objects of the act to transfer it to an outside body.

Mr. Odey on February 12 also asked the Minister of Transport, whether, as some sparsely-populated districts would be adversely affected by the enforcement of the 25-mile radius for private road hauliers, he would consider introducing legislation with a view to increasing the radius from 25 to 60 miles.

Mr. Alfred Barnes stated in a written answer: No. I do not agree that these districts will be adversely affected.

Taxation of Nationalised Industries

Sir Herbert Williams (East Croydon—C.) on February 20 asked the Chancellor of the Exchequer whether the advertising of British Railways and other nationalised industries for the purpose of reducing the demand for their goods and services would be an allowable expense for income tax purposes.

Mr. Hugh Gaitskill in a written answer stated: I cannot supply information about the income tax treatment of particular concerns. The general rule is that advertising expenditure is deducted in computing profits for tax purposes if it is incurred exclusively for the purpose of the business.

Glasgow Road Tunnel Scheme

Mr. J. McInnes (Glasgow Central—Lab.) on February 12 asked the Minister of Transport what progress had been made in negotiations with Glasgow Corporation on the proposed Linthouse-Whiteinch road tunnel.

Mr. Alfred Barnes stated in a written answer: The Corporation has made a further submission; this has been fully considered, but the Government cannot approve the commencement of the scheme in the present situation.

Train Services in Malaya

Mr. David Renton (Huntingdon—Nat. Lib.-Con.) on February 14 asked the Secretary of State for the Colonies whether he was aware that the Malayan Government had stopped the running of the night mail train from Kuala Lumpur to Singapore, thus causing inconvenience to business people in Malaya; what were the reasons for stopping the train from running; and when would the service be restored.

Mr. John Dugdale (Minister of State for Colonial Affairs) in a written answer stated: Yes. The number of civilian passengers using this service had, however, become very small, no doubt owing to the vulnerability of the railway to night attack. Extra facilities for day travel are being provided, and the Malayan Railway will no doubt consider restoring the service when the demand justifies it. There are, of course, frequent daily air services.

The Architecture of Transport

Lord Hurcomb opens an exhibition showing modern design in transport buildings of all kinds

An exhibition entitled "Architecture of Transport" was opened on February 21 by Lord Hurcomb, Chairman of the British Transport Commission, at the Royal Institute of British Architects. The exhibition has four sections—rail, water, road, and air—and shows by means of photographs, plans, and models the contribution of the architect in transport. Examples are given of both British and overseas practice. The exhibition, which is free, will remain open until March 22. Members and officers of the British Transport Commission and its Executives accepted invitations to the opening.

Lord Hurcomb, who was introduced by Mr. Graham Henderson, President, R.I.B.A., said it was only to be expected that the railways should provide many exhibits. They might wonder why foreign railways could supply so many photographs of new schemes accomplished, yet British Railways were represented rather by drawings showing what it was hoped to accomplish. One reason for the smaller output of new railway building in this country was the fine quality of the buildings they had inherited.

The Commission had generally endorsed the views expressed by its committee on Relics & Records and had accepted the policy that the care of its historic buildings and other structures had to be treated as an important trust. Many of the buildings depicted in the exhibition replaced buildings destroyed in the war. Much war damage had still to be made good.

Before schemes were carried out they might undergo changes demanded by local planning requirements, changed economic circumstances, or new conditions of railway operation. Despite the admirable planning and good construction of their old transport buildings, in a number of them the traffic had long outgrown the accommodation. Much study had been given by the former railway companies to such problems, and notable work was done before the war. British Railways and London Transport were trying to plan wisely

for the years when capital investment would be released from stringent controls and materials be more freely available.

Before the war an ambitious scheme for the complete reconstruction of Euston was prepared by the L.M.S.R. Today, they had to take sober views of what was economically possible, and their present plans were to introduce substantial improvements at Euston within the general framework of the present station.

Restoring Depots and Warehouses

British Transport was concerned not only with building for the public. Large resources had to be concentrated on restoring and improving depots and warehouses, providing freight traffic facilities, and works such as round houses and motive power depots. The Commission attached great importance to programmes for modernisation and general tidying up of the many buildings that remain substantially fitted for their task. British Railways had twelve such station schemes for the current year. If there was no serious deterioration in the economic situation they might look forward to increased activity of this kind next year.

In the design of new rolling stock the carriage and wagon engineers of British Railways were working in the closest collaboration with the architects. The dining cars introduced by the former L.M.S.R. just before the Commission took over were an important stage in the development of this closer contact. These cars had been accepted as the prototype of the new British Railways dining car. New trains to be introduced in connection with the Festival of Britain would contain first and third class compartments which he hoped would illustrate still further the development of this new approach to the design of railway rolling stock.

It was fortunate that the great civil engineers who built the main body of the canal and railway system were men with a very wide range of capability. Many had been trained in the old traditions of fine crafts-



Left to right: Lord Hurcomb, Messrs. Graham Henderson, Howard Robertson, F.R.I.B.A., J. S. Wills, and J. H. Brebner (Public Relations Officer, B.T.C.)

manship still strong and undecayed in the age in which they lived and worked.

A vote of thanks to Lord Hurcomb was proposed by Mr. Howard Robertson and seconded by Mr. J. S. Wills, President of the Institute of Transport.

Contracts & Tenders

The Railway Executive has recently placed a contract with Head, Wrightson & Co. Ltd., for five 40-ton bogie trolley well wagons, with a 15 ft. well, and for five 40-ton bogie trolley flat wagons, with a 35 ft. 6 in. well.

An order worth £25,000 for 18 steam hammers, of falling weight varying from 15 to 30 cwt., has been placed by the South African Railways with R. G. Ross & Son Ltd.

The Queensland Government has placed an order with the Metropolitan-Cammell Carriage & Wagon Co. Ltd., for 1,000 "FJS" type four-wheel open low-side wagons.

Three 85-ft. stainless-steel railcars of the Budd type, equipped with hydraulic transmission, have recently been shipped to Australia. They are intended to work over the east-west transcontinental line of the Commonwealth Government between Kalgoorlie, Western Australia, and Port Pirie, Southern Australia. Four standard coaches have been supplied with the cars.

Notes and News

Assistant Chief Mechanical Engineer Required.—Applications are invited for the post of assistant chief mechanical engineer required by the Paraquay Central Railway. See Official Notices on page 255.

New Ship for Isle of Wight Service.—A new vessel, *M.V. Shanklin*, was launched on February 22 at the yard of William Denny & Bros. Limited, Dumbarton, by Mrs. Barrington-Ward, wife of Mr. V. M. Barrington-Ward, Member of the Railway Executive. The new vessel, which will shortly join the Southern Region fleet operating between Portsmouth and Ryde, will replace a paddle steamer of the same name which has recently been withdrawn after 26 years in service. The *Shanklin* will be a sister ship to the *Southsea* and *Brading*, also built by William Denny &

Bros. Limited, and placed in service in 1948. Principal dimensions are: length overall 200 ft., breadth moulded 46 ft., draught 7 ft., gross tonnage 965. Accommodation (including refreshment rooms and lounges) will be provided for some 1,400 passengers. Propulsion will be by twin screws directly driven by two Denny-Sulzer 8-cylinder diesel engines, each of 950 b.h.p., giving a speed of 14½ knots. The vessel will have twin rudders operated by electro-hydraulic steering gear, and will be equipped with radar.

Night Air Mail Services to Belfast and Dublin.—A new night air mail service between Great Britain and Northern Ireland will be inaugurated on March 12. The service will be operated by B.E.A. between Manchester and Belfast airports. At the same time a new night air mail service between Manchester and Dublin will be inaugurated in conjunction with the Irish Republican Post Office. The air operators will be Aer Lingus Teoranta.

Leopoldina Sale Delayed.—The directors of the Leopoldina Railway Company announces that the purchase price for the sale of its undertaking to the Brazilian Government has not yet been received. They are informed that delays have been caused by the recent election in Brazil and the installation of a new President with consequential changes in Government offices. The representative of the company in Brazil has been authorised to state that it is the intention of the Brazilian Government to bring matters to a conclusion in terms of the sale agreement dated May 26, 1949, and the Brazilian law ratifying it, with the minimum of delay. The sale price is £10 million, of which £500,000 has already been advanced for stores and stocks.

Uruguay Railway Payments.—The joint liquidators of the Central Uruguay Railway Company have been granted a court order to make a first and final distribution to the ordinary stockholders of 12½ per cent, as provided in the scheme of arrangement. No statement can be made yet as to any possible further payment on the 5 per cent, second debenture stock pending the result of the legal action in Uruguay brought by the former staff. Regarding applications made for the Midland, Uruguay, Uruguay Northern, and North-

Western of Uruguay railways in voluntary liquidation, the liquidators are permitted to proceed with the distribution of the remaining assets and to close the liquidations. The distributions will probably slightly exceed the amounts estimated in the scheme of arrangement.

Engineer Required.—An engineer with commercial experience, accustomed to handling enquiries through all stages, required for a head office in London. Preference given to a man with previous diesel rail traction experience. See Official Notices on page 255.

Locomotive Engineer Required.—A locomotive engineer, experienced in running shed work, is required by a British mining company in Spain to fill the position of assistant locomotive superintendent. See Official Notices on page 255.

Stephenson Locomotive Society.—Mr. D. S. Barrie, Public Relations Officer, Railway Executive, will read a paper on "Progress and Problems of British Railways," before the Stephenson Locomotive Society on March 12. The meeting will be held at 32, Russell Road, Kensington, London, W.14, at 6.30 p.m.

Ransome & Marles Share Offer.—The directors of the Ransome & Marles Bearing Co. Ltd. intend to offer 800,000 unissued 5s. shares to the shareholders at a price of 20s. each. The additional capital is required for a new factory which the board has decided is essential to meet increasing demands.

London-Inverness Air Link Suggested.—It has been suggested that a direct air service should be run between London and Inverness during the peak months of holiday travel. The suggestion has come from the Highland Advisory Committee of the Scottish Tourist Board which is asking the board to take it up with B.E.A.C.

New Series of Posters.—The London Midland Region, Public Relations & Publicity Department, has produced a new series of posters for display on British Railways stations during the coming spring and summer months. Double-royal posters for Southport, New Brighton, and Fleetwood, and a quad-royal poster for Blackpool, have been produced, and in each case the address of the local department from which guides and information



Mrs. Barrington-Ward, wife of Mr. V. M. Barrington-Ward, Member of the Railway Executive, launching the new Southern Region vessel *M.V. "Shanklin"* at Dumbarton on February 22 (see paragraph above)

OFFICIAL NOTICES

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APPLICATIONS are invited for the post of Assistant Chief Mechanical Engineer on a 3 years' Contract at a salary of 1,300 Guaranes per month, plus one month's salary as annual bonus, with free unfurnished house. (£1 equals 22.54 Guaranes.) Knowledge of Spanish is essential. Reply to Secretary, PARAGUAY CENTRAL RAILWAY Co. LTD., 12/13, South Place, London, E.C.2.

ENGINEER with commercial experience, accustomed to handling enquiries through all stages, required Head Office, London. Preference given to man with previous diesel rail traction experience. Applicants to give full particulars and previous experience, and state age and salary required. Replies to Box 995. *The Railway Gazette*, 33, Tothill Street, London, S.W.1.

IMPORTANT OIL COMPANY require Railway trained engineer as representative. Experience with diesel engines an asset but not essential. Age about thirty. Reply giving age, experience, etc., to Box 990, *The Railway Gazette*, 33, Tothill Street, London, S.W.1.

WANTED by large British mining company in Spain, Locomotive Engineer experienced in running shed work to fill position of Assistant Locomotive Superintendent. Applicants must have had experience in supervision of running repairs and the preparation and organisation of a locomotive fleet for daily service. Salary £700 to £750 per annum with free unfurnished quarters and certain additional allowances for married men. Write giving full details of education and experience and stating age and whether married or single. Married men must give sex and ages of their children. Box 1,548, c/o Streets, 110, Old Broad Street, London, E.C.2.

TRANSPORT ADMINISTRATION IN TROPICAL DEPENDENCIES. By George V. O. Bulkeley, C.B.E., M.I.Mech.E. With chapters on Finance, Accounting and Statistical Method. In collaboration with Ernest J. Smith, F.C.I.S., formerly Chief Accountant, Nigerian Government Railway. 190 pages Medium 8vo. Full cloth. Price 20s. By post 20s. 6d. *The Railway Gazette*, 33, Tothill Street, London, S.W.1.

GLOSSARY OF WOOD. A technical dictionary for all associated with timber and its uses. Ten thousand terms about timber—the common and the little known, the old and the new. Ten thousand definitions covering the entire field of timber and its uses—growth, marketing, utilisation. The commercial timbers, their qualities and uses, tools and wood-working equipment, are all here explained simply, concisely and accurately. Illustrated by many clear line drawings. Price 21s. net. By post 21s. 9d. Tothill Press Limited, 33, Tothill Street, London, S.W.1.

may be obtained, is shown. A further double-royal poster deals with British Railways "Holiday Guides" and sets out the five areas into which the series has been divided. Other double-royal designs are being printed for Morecambe, Buxton, and the Isle of Man.

Institute of Transport.—The annual dinner of the Institute of Transport will be held at the Connaught Rooms, Great Queen Street, London, W.C.2, at 7 p.m. for 7.30 p.m. on Friday, March 16.

Railway Students Association.—Mr. David Blee, Member, Railway Executive, will read a paper entitled "The Commercial Field for the Student of Transport" before the Railway Students Association on March 4. The meeting will be held at the London School of Economics & Political Science, Houghton Street, Aldwych, London, W.C.2, at 6 p.m.

Lord Latham Unveils Mural in London Transport Canteen.—A 24-ft. long mural by a Metropolitan Line permanent way worker, which decorates the staff canteen at London Transport headquarters, was unveiled by Lord Latham, Chairman of London Transport, on February 22. Mr. Edward Sebley, the artist, devoted 850 hours to it, after spending nine months working on ideas for the mural, which is a pageant of country scenes symbolically linking the ages of man with the four seasons.

Mannex (London) Limited: Engineering Division Reorganised.—As a result of the trade agreement with Western Germany, resulting in increased business, the engineering and plant division of Mannex (London) Limited, 54, Victoria Street, London, S.W.1, has been reorganised under the name of D.M.M. (Machinery) Limited, 119, Victoria Street, London, S.W.1. The personnel of the machinery division will be transferred to the new organisation. D.M.M. (Machinery) Limited represent the following firms in Great Britain: Demag A.G.; Maschinenfabrik Meer A.G.; Carl Canzler; and Miag Fahrzeugbau G.M.B.H.

Brush-Aboe Apprentice Training Scheme.—Engineering graduates of universities in all parts of the Commonwealth will be able to apply to join a new scholarship scheme for apprentice training in Britain. The scheme, which provides a thorough training at the Brush-Aboe group of factories, recently was announced by Sir Ronald Matthews, Chairman. The scheme will allow for two years' study, and the first twelve months of each course is intended to provide a general training in basic manufacturing procedure, after which the apprentice will receive

more specialised training in the factories of the group. A free return passage will be provided as well as travelling expenses. Wages will be the same as those paid to other graduate apprentices at present working at the group factories. Sir Ronald Matthews also announced an offer for the engineering staff of the overseas subsidiaries to aid technical education in the various Commonwealth countries.

Informal Staff Meeting at York.—The tenth in the series of informal staff meetings in the North Eastern Region of British Railways took place at York on February 16. Mr. H. A. Short, Chief Regional Officer, North Eastern Region, presided.

Strike of Paris Transport Workers.—Workers of the Paris Passenger Transport Board staged a 24-hr. strike on February 26, the day that the new fares came into operation. The strike, which was a demonstration over the Governments' refusal to agree to a wage increase of fr. 6,000, halted all bus and Metro services.

Merger of Indian Railways Approved.—An agency message states that the Central Advisory Council for Railways, of India, has accepted proposals for the amalgamation of the South Indian, Madras & Southern Mahratta, and Mysore Railways. This is part of the programme of regrouping of railways under the consideration of the Government of India. The new amalgamated railway system will be called the Southern Railways.

Increased B.E.A. Earnings.—British European Airways earned a revenue of £8,629,497 in 1950 as compared with £6,494,106 during the previous twelve months. Total expenditure was £9,582,734, compared with £7,997,551, the deficit falling from £1,502,445 to £953,237 or about 37 per cent. The number of passengers carried was 912,615, or 29 per cent. more than in 1949, and freight ton-miles rose from 5,425 to 9,281 or 71 per cent. Mail ton-miles were 5,097 against 3,893 in the previous year.

Franco-German Wagon Agreement.—It is reported from Frankfurt that the German and French railways have drafted an agreement reducing difficulties in the exchange of wagons between the two countries. Up to 50,000 wagons of one country may now circulate in the other country without being immediately sent back after unloading. The wagons will remain the property of the railway administration to which they originally belong, but will bear the additional inscription, "union." A central board for the administration and maintain-

ance of these wagons will be set up in Paris. It is hoped that this agreement, which is expected to become valid on May 1, will be the first stage of a joint Western European wagon pool.

Thos. Cook & Son: Operatic Society.—The operatic society of Thos. Cook & Son Ltd. last week presented three performances of "The Rebel Maid" at King George's Hall, Tottenham Court Road, London.

Coach Struck by Train in Victoria, Australia.—Eleven passengers were killed and eleven injured when the motorcoach in which they were travelling was struck by a goods train at a level crossing at Horsham, Victoria, on February 24.

Diesel Engine Users Association.—At a meeting of the Diesel Engine Users Association to be held at Caxton Hall, Westminster, London, S.W.1, at 2.30 p.m. on March 15, Mr. G. B. R. Feilden will read a paper on "Operating Experience with a 750-kW. Industrial Gas Turbine."

Wagon Company Merger.—L. & Y. Holdings Limited has been formed to amalgamate the Lancashire & Yorkshire Wagon Co. Ltd. with Foundry Equipment Limited and its associated company High Grade Castings Limited. The offer is conditional on acceptance in respect of not less than 90 per cent. of the shares of the two companies.

Collision at Rochdale Station.—At 9.25 p.m. on February 25, the 7.5 p.m. express from York to Liverpool ran into a light engine at Rochdale Station, London Midland Region. Four passengers were detained in Rochdale Infirmary, 31 were treated for shock and minor injuries, and eight were given first aid on the station. The guard of the express and fireman of the light engine also received injuries.

Subsidiary Steel Companies.—The Iron & Steel Corporation of Great Britain issued on February 22 a list of 137 companies which, in addition to the 80 companies which were vested in the corporation on February 15, became publicly owned on the same day. These are wholly-owned subsidiaries which remain under the control of the parent company, but, since the shares of these companies are entirely owned directly or indirectly by the corporation, they bring the number of publicly owned steel concerns to 217.

Mavitta Drafting Machines.—Among the exhibitors at the British Industries Fair this year will be Mavitta Drafting Machines Limited, Shirley, Birmingham, which firm will be showing a complete range of draft-

ing machines to fit boards of all sizes up to 84 in. x 44 in. and upwards, mounted on adjustable drawing stands. Exhibits will include a machine designed primarily for the production of full-scale drawings.

British Railways to Restore Many Services for Easter.—From Monday, March 19, until Wednesday, March 28, inclusive, British Railways will restore the principal main-line trains and their connecting services which were recently withdrawn, and relief trains will also be run as required. Seats will be bookable in advance for this period on all services to which this facility would normally apply. The usual holiday programme of excursion trains will be provided on Good Friday, Easter Sunday, and Easter Monday.

Forthcoming Meetings

March 3 (Sat.).—Historical Model Railway Society, at the headquarters of the Stephenson Locomotive Society, 32, Russell Road, London, W.14, at 3 p.m. "The Progress of Commercial Model Railways," by Mr. W. J. Bassett-Lowke, Vice-President of the Society, and Mr. R. H. Fuller.

March 3 (Sat.).—Electric Railway Society, at the Fred Tallant Hall, Drummond Street, London, N.W.1, at 3 p.m. "Electrification in the Manchester Area," by Mr. R. K. Kirkland.

Until March 22 (Thu.).—Royal Institute of British Architects, 66, Portland Place, London, W.1. "Architecture of Transport Exhibition," open 10 a.m. to 7 p.m. weekdays, 10 a.m. to 5 p.m. Saturdays.

March 5 (Mon.).—Institute of Transport Metropolitan Section, at 80, Portland Place, W.1, at 5.30 for 6 p.m. "Air Transport by Charter Companies," by Captain R. J. Ashley, Managing Director, Skyways Limited.

March 6 (Tue.).—Institution of Civil Engineers, Great George Street, Westminster, S.W.1, at 5.30 p.m. "Methods of Effecting Economy in Track Maintenance & Renewal," by Mr. E. C. Cookson, Assistant Engineer (Permanent Way), Western Region.

March 6 (Tue.).—South Wales & Monmouthshire Railways & Docks Lecture and Debating Society, at the Angel Hotel, Westgate Street, Cardiff, at 6.30 p.m. "The Administration of a Railway Engineering Division as seen by a Chief Clerk," by Mr. A. E. Maddox.

March 8 (Thu.).—The Engineers' Guild, Metropolitan Branch, at Caxton Hall, Caxton Street, Westminster, S.W.1, at 6 p.m. Discussion: "The Engineer and the Public," introduced by Mr. H. Nimmo, Chairman, Southern Electricity Board.

March 8 (Thu.).—Irish Railway Record Society, "The Bagenalstown & Wexford Railway," by Mr. R. N. Clements.

March 8 (Thu.).—Institute of Traffic Administration, London Centre, at Caxton Hall, Caxton Street, Westminster, S.W.1 at 7.15 p.m. "Transport in Africa," by Mr. M. W. Harris.

March 9 (Fri.).—Institution of Locomotive Engineers, Annual Luncheon at the Dorchester Hotel, Park Lane, London, W.1, at 1 p.m., reception at 12 noon.

March 9 (Fri.).—Institution of Mechanical Engineers, Storey's Gate, St. James's Park, London, S.W.1, at 5.30 p.m. "Further Mechanical Aids for the Foundry," by Mr. A. S. Beech.

Railway Stock Market

There have been many factors influencing markets and chief of these was a tendency for optimistic dividend hopes to give way to more cautious estimates in view of the coming Budget. Sharp increases in taxation are expected and it is difficult to see how some of the dividend hopes can be realised. On the other hand, many leading industrial shares still give quite reasonable yields, even if dividends remain as last year. In the circumstances it is perhaps not surprising that there has been a tendency for buying interest to switch from industrial to commodity shares, particularly to shares of companies registered outside the U.K. Another factor which has affected sentiment in regard to industrial shares is the knowledge that rising costs must affect earnings of many companies this year.

The coming further increase in railway charges and fares is only one of the many inflationary trends which have a cumulative effect and produce growing problems for industry. British Funds have been firmer, and have taken their cue from the nationalisation steel stock, which has been inclined to improve now the greater part of selling of this stock appears to have finished. It is now clear that the rather surprising outburst of activity in stock markets in January and the greater part of last month was due in a large measure to selling of steel shares and later steel stock for reinvestment in industrial shares.

Foreign rails have been rather more active, but in general movements on balance were small and unimportant. Canadian Pacific were again prominent because of the view that a higher dividend is in prospect and the possibility of fresh oil discoveries on some of the properties in which the company is either directly or indirectly interested. Canadian Pacific have advanced further to 55 in active dealings. The preference stock was at 77 and the 4 per cent. debentures 100½. Latest revival of talk of take-over possibilities, although lacking confirmation, brought in buying of United of Havana stock earlier in the week, when the 1906 debentures strengthened to 18. Elsewhere, however, Antofagasta preference eased to 52; the ordinary stock was 7½. Bolivar "C" debentures were 57 and La Guaira ordinary

stock 83. Manila "A" debentures eased to 62; the preference shares were 6s. 3d. Nitrate Rails, which are "ex" their capital return, were 23s. 1½d. Taltal shares firmed up to 18s. 6d. Mexican stocks have been quieter, with National of Mexico 4½ per cent. non-assented at 41½, and Mexican Central "A" bonds at 59½.

Brazil Rail gold bonds were 43½. Great Western of Brazil held firm at 157s. 6d. and San Paulo were 15s. 10½d. Leopoldina issues eased, but later tended to rally because delay in payment of the take-over money by Brazil does not in any way affect the compensation value of the various stocks. Leopoldina ordinary is changing hands around 11, the preference stock is 28, the 4 per cent. debentures 97½, and the 6½ per cent. debentures 145. Leopoldina debentures were 94 and the ordinary units 1s. 1½d. A sharp advance in Guayaquil & Quito bonds to close on 34 was accompanied by talk of prospects of debt service negotiations.

Road transport shares held steady, but with few dealings recorded in most cases. B.E.T. deferred stock was £520, Southdown held at 103s. 9d., West Riding were 53s., and Lancashire Transport 61s. 3d.

Engineering shares were once more favoured as reinvestments. Clarke Chapman rallied to 60s. 7½d., Guest Keen were 53s., and T. W. Ward 65s. 9d. Cammell Laird, at 15s., and Vickers at 40s. 1½d., were both firm again awaiting the results, which the market expects will show higher dividends. The English Electric dividend increase produced a big rise in the price of the shares which were up to 65s. at one time before profit-taking developed. Associated Electrical and G.E.C. have also been active at higher prices.

Shares of locomotive builders and engineers turned steadier after their recent moderate reaction. Sentiment was helped to some extent by hopes that re-opening of meat discussions with the Argentine may lead to settlement of other outstanding questions including the remitting home of profits earned by British companies in the Argentine. Vulcan Foundry were 24s. 3d., North British Locomotive 21s. 3d., Beyer Peacock 25s. 3d., Gloucester Wagon 17s., Wagon Repairs 15s. 7½d., and Birmingham Wagon 34s. 9d. Hurst Nelson were 62s.

Traffic Table of Overseas and Foreign Railways

Railway	Miles open	Week ended	Traffics for week		No. of trains	Aggregate traffics to date	
			Total this year	Inc. or dec. compared with 1948/49		Total 1949/50	Increase or decrease
Canada							
Antofagasta ...	811	18.2.51	£ 57,270	—	7	£ 640,820	+ 166,190
Costa Rica ...	281	Jan., 1951	cl. 155,525	+ c391,617	31	c7,336,254	+ cl. 416,484
Dorada ...	70	Jan., 1951	41,557	+ 3,460	4	41,557	+ 3,460
Inter. Ctl. Amer. ...	794	Dec., 1950	\$1,205,407	+ \$54,553	52	\$13,466,226	+ \$1,071,160
La Guaira ...	224	Sept., 1950	\$68,726	— \$39,529	39	\$725,535	— \$241,943
Nitrate ...	382	15.8.50	10,816	— 8,656	32	286,336	+ 6,203
Paraguay Cent. ...	274	16.2.51	£ 220,332	+ £ 80,415	33	£ 6,715,930	+ £ 2,029,225
Peru Corp. ...	1,050	Jan., 1951	\$8,019,000	+ \$1,564,300	31	\$54,149,000	+ \$13,898,342
" (Bolivian Section)	66	Jan., 1951	Bs. 14,487,000	+ Bs. 4,964,000	31	Bs. 84,401,000	+ Bs. 12,008,836
Salvador ...	100	Dec., 1950	c246,000	— c32,000	26	c769,000	+ c39,000
Taltal ...	154	Jan., 1951	\$1,605,891	+ \$141,383	31	\$10,862,693	+ \$1,725,484
South & Central America							
Canadian National†	23,473	Jan., 1951	15,636,000	+ 3,955,000	4	15,636,000	+ 3,955,000
Canadian Pacific†	17,037	Dec., 1950	11,274,000	+ 1,235,000	52	126,192,000	+ 5,108,000
Various							
Barsi Light* ...	167	Dec., 1950	25,137	— 2,955	39	257,055	— 9,900
Egyptian Delta ...	607	10.10.50	18,245	+ 1,296	28	319,911	— 24,005
Gold Coast ...	536	Dec., 1950	304,770	+ 18,020	40	2,263,935	+ 83,014
Mid. of W. Australia	277	Nov., 1950	40,070	+ 10,472	22	193,383	+ 51,544
Nigeria ...	1,900	Jan., 1950	502,360	+ 38,978	44	5,017,814	+ 266,573
South Africa ...	13,347	3.2.51	1,883,082	+ 399,832	43	75,293,212	+ 10,056,150
Vicoria ...	4,744	Sept., 1950	1,729,344	+ 103,977	13	—	—

* Receipts are calculated at 1s. 6d. to the rupee

† Calculated at 83 to £1